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STEAM NAVIGATION, COMMERCE, FINANCE,

INSURANCE, BANKING, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, APRIL 9, 1859.

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NEW-YORK:

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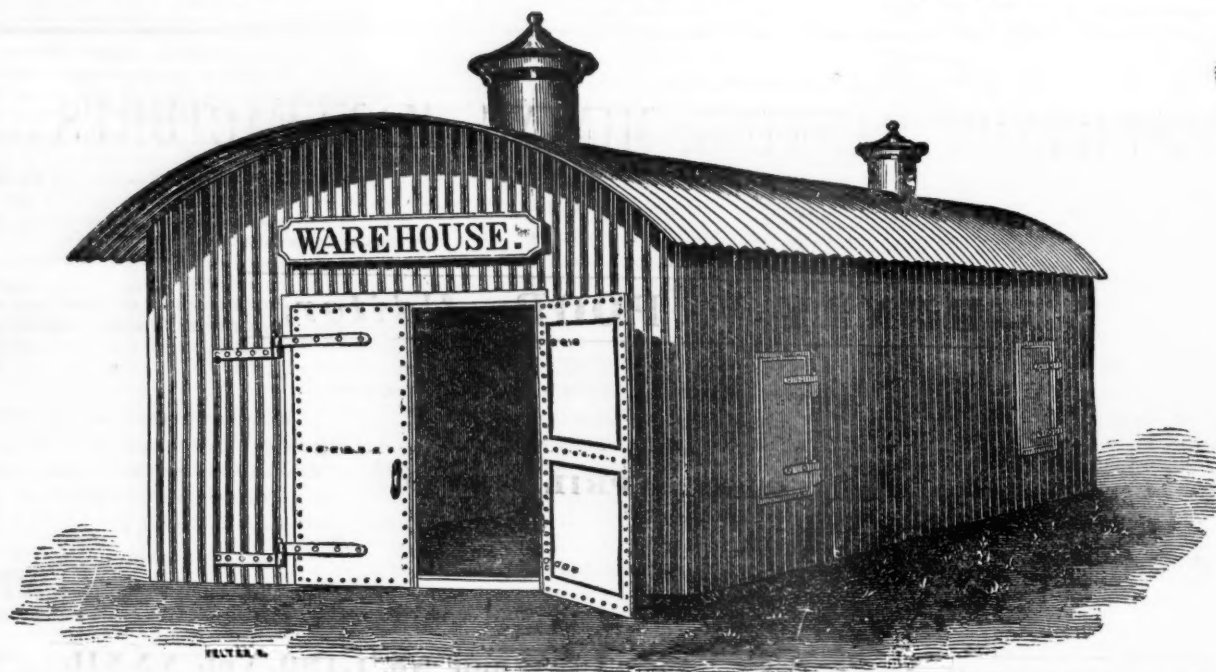
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SECOND QUARTO SERIES, VOL. XV., No. 15.]

SATURDAY, APRIL 9, 1859.

[WHOLE No. 1,199, Vol. XXXII.]

MESSRS. ALGAR & STREET, No. 11 Clements Lane, Lombard Street, LONDON, are the authorised European Agents for the Journal.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO. No. 9 SPRUCE ST.

New York, Saturday, April 9, 1859.

The Cumberland Coal Company Case.

This case is of much importance, in view of the decision rendered by the Supreme Court therein, and we think a brief history of the suit will be acceptable to our readers.

The question is, whether the purchase of corporate property by a director intrusted with the duty or responsibility of making the sale, is invalid, as being contrary to public policy.

The suit was brought by the Cumberland Coal and Iron Company, a mining company in Maryland, against Sherman, Dean and Postley. By the complaint it appears that early in the history of the company Sherman was elected a Director, and was subsequently appointed one of the Executive committee. In 1855, he offered a resolution at a meeting of the directors for the appointment of a committee to report what part of the Company's mining lands could be sold without disadvantage. The resolution was passed, and Sherman himself appointed chairman of the committee. They in due time reported, recommending a sale of 1,548½ acres. At a subsequent meeting, a resolution was passed authorizing the President and Secretary to sell and convey a part of these lands; and thereupon a deed was executed of 1,215 acres to Sherman and Dean, for \$140,000. A contract was at

the same time executed with Sherman and Dean, securing to them important advantages in transportation over the company's road. The action of the President and Secretary in this matter was formally approved by the Board.

The complaint also averred in addition to the foregoing facts, that the price at which the lands were sold was grossly inadequate; and the rates permitted in the transportation contract above mentioned were so low as to afford no compensation to the company, and that the President made a false and fraudulent report of these dealings to the stockholders at their meeting.

Sherman and Dean, it is further alleged, in connection with Postley and others, organized the Hoffman Coal Company. They conveyed the lands and assigned the transportation contract to that company; and Sherman and Dean between them took 4,990 shares out of 5,000 shares into which the stock was divided.

The complaint prayed that the deed and contracts might be declared void and canceled. The plaintiffs now moved for an injunction pending the suit.

The affidavits to oppose the motion denied all charges of fraud, but did not deny the sale and conveyance and the making of the transportation contract, or that the price was inadequate. They alleged that the stockholders at their meeting in June 1857, ratified the dealings in question, but did not deny the President made the representation to the meeting charged in the complaint. They alleged that several of the stockholders had solicited Sherman to make the purchase, and that the lands could not have been sold if he had not been willing to do so.

The motion was brought before Hon. Justice DAVIES, who rendered an elaborate and lengthy opinion, which sets forth in detail various circumstances of the case, additional to those stated above, apparently indicating a fraudulent design on the part of the defendants; but which it will be unnecessary to repeat, as he arrives at a decision without considering the question of fraud. The opinion concludes as follows:

"The cases in reference to the dealings of an agent or trustee with the property, in reference to which his agency or trust exists, may be arranged into two classes.

First—Cases in which a trustee buys or contracts with himself or with several trustees, of which he is one, or a board of trustees of which he is one; and it will be seen by reference to the authorities hereinafter cited, that the incapacity to purchase applies to all these cases.

Second—Cases in which a trustee buys of or contracts with his *cestui que trust*, who is *sui juris*, and incompetent to deal independently of the trustee in respect to the fund estate.

As to the first class of cases, the purchase is virtually at the option of the *cestui que trust*, without reference to the fairness or unfairness of the purchases or contracts. For the reasons before given the disqualification of the party purchasing or contracting is a conclusion of law and is absolute."

[His Honor here proceeds to an elaborate and searching review of the authorities both in English and American jurisprudence, and under the civil law, in support of the rule above stated, which he re-states as follows:]

It is thus seen that the rule by which agents or trustees are prohibited and rendered incapable of purchasing or dealing with property of their *cestui que trusts*, is one of universal application, fortified by a current of theory and high authorities, and is adhered to with stern and inflexible integrity; and the consequence of such dealing and purchasing is, that the agent or trustee is liable at any time, on the application of the *cestui que trust*, and as a matter of course, and without reference to the fairness or unfairness of the transaction, the adequacy or inadequacy of the price paid, or any other equities of the agent or trustee, to have the sale set aside. Such has been the uniform administration of the law in England and where the civil law prevails, and in this country. No reason is suggested why rules thus founded on the soundest morals, which have been maintained with such uniformity and steadiness, should never be relaxed. On the contrary, it is seen that every consideration arising from circumstances surrounding us, and the unparalleled multiplicity of corporations, who can act by trustee or agents, and the very large proportion of the wealth of the country invested in them, and placed under the control and management of agents and trustees, forcibly demands of courts of justice a firm adherence to these principles, and a stern application of them to every case coming within the sphere of their action. Nay, the rule, as applicable to managers or corporations, should in no particular be relaxed. Those who assume the position of directors and trustees assume also the obligations which the law imposes on such a relation. The stockholders confide to their integrity, to their faithfulness, watchfulness, the protection of their interests.

This duty they have assumed, this the law imposes on them, and this those for whom they act have a right to expect. They are not permitted to watch over their own interests; they cannot speak in their own behalf; they must trust to the fidelity of their agents. If they discharge these important duties and trusts faithfully, the law interposes its shield for their protection and defence: if they depart from the line of their duty, and waste or take themselves, instead of protecting, the property and interests confided to them, the law, on the application of those thus wronged or despoiled, promptly steps in to apply the correction, and return to the injured what has been lost by the unfaithfulness of the agents.

This right of the *cestui que trust* to have the sale vacated and set aside, when his trustee is the purchaser, is not impaired or defeated by the circumstances that the trustee purchased for another. [Citing *ex parte Bennet*, 10 Ves. 386.] It follows, therefore, that if defendant Sherman was incapacitated to purchase for himself, he was equally incapacitated to act for the defendant Dean; and if Dean were sole purchaser, the purchase would be set aside.

Neither are the duties or obligations of a director or trustee altered from the circumstance that he is one of a number of directors or trustees, and that this circumstance diminishes his responsibility, or relieves him from any incapacity to deal with the property of his *cestui que trust*. The same principles apply to him as one of a number as if he were acting as a sole trustee.

[His Honor next proceeds to decide that the action of the stockholders at the meeting of June, 1857, in ratifying the dealings with Sherman and Dean, was not such a ratification as prevents the company from maintaining their suit; for the general reason that they had not knowledge of all facts. He then states the final conclusion to which he arrives.]

I have arrived at the conclusion, entirely clear to my own mind, that this deed and contract cannot be sustained.

I have arrived at the result without considering the question of fraud raised in the complaint and denied by the affidavits. I have chosen to place my decision on higher and more satisfactory grounds. For the reasons I have stated, the plaintiffs having established a *prima facie* right to have the deed and contract case called and the lands sold reconveyed to them, it is my duty to restrain the defendants until the hearing of this cause, as asked for in the complaints and supplemental complaints.

The plaintiffs have the right to their real estate, or anything into which it has been transmuted.—It is, therefore, proposed to restrain the defendants from transferring the stock owned by them in the Hoffman Coal Company, which but represents the real estate of the plaintiffs, and the privileges and advantages secured by the transportation contracts.

The motion for injunction is therefore granted.

Pacific Railroad.

At the meeting of this company held in St. Louis on the 28th ult., the following gentlemen were elected Directors, viz: J. P. H. Gray, H. L. Patterson, James E. Yeatman, A. Meier, Geo. R. Taylor, Joseph Charless, Robert Campbell, Thomas Allen, Daniel R. Garrison, John M. Wimer, B. W. Glover, Robert Barth.

The report of the company made to the stockholders states that on the 4th of May last, there were 25 miles of new road opened from Jefferson City to California, in Moniteau county; and on the 25th of July following, 12½ miles additional of track was opened; making 37½ miles of new track added to the Pacific road during the year. In addition to this, 19 miles of track on the Southwest Branch, from Franklin to St. Clair station, has been opened. A length of six additional miles on the Southwest Branch is ready for the

rails, and will be opened in a few weeks. It is expected also that by the first of October next, the road will be opened to Jamestown, a distance of 104 miles from St. Louis.

The receipts of Transportation Department from opening of road to March 1, 1859, were.....\$2,006,824 02
Total expenses of Transportation Department to same date..... 1,270,273 54

Cash balance.....\$736,550 48
—which sum has been applied to the payment of interest on State bonds, and has reduced the interest account on the books of the company to that amount.

It is estimated that it will require \$3,250,000 to complete the road to Kansas City.

TREATISE ON THE PRINCIPLES of CIVIL ENGINEERING AS APPLIED TO THE CONSTRUCTION of WOODEN BRIDGES.

By S. S. Post, Civil Engineer,
And late Chief Engineer of the N. Y. & Erie R. R.

§ 1. Force is an agency which, applied to a load, tends to impart motion to it, or to retard it, or to bring it to a state of rest.

§ 2. When two or more forces acting upon a body neutralize each other, the result is an *equilibrium*, called *pressure*.

§ 3. Two weights or pressures are *equal* when one may be substituted for another with similar results.

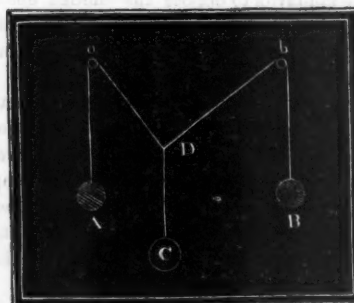
§ 4. If two or more forces act upon the same point, their united effect is called the *resultant* of these forces.

§ 5. The several forces, whose combined effect is equivalent to a single force are called the *components* of that force.

§ 6. The resultant is mechanically equal to its components, and can be substituted therefor; or, the components for the resultant, without change of condition.

This proposition may be illustrated as follows:

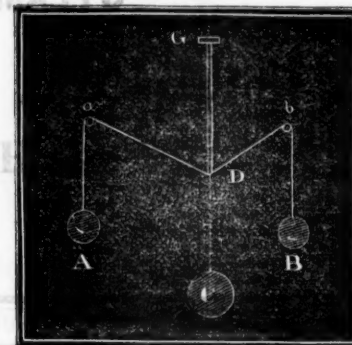
Fig. 1.



a. Let a fine line be passed over two pulleys (a and b) fixed against a vertical plane or wall, and let known weights (A and B) be attached to the ends of the line. At some point (D) in this line, between the pulleys, knot another line with a third weight (C) attached. If the weight C be less than the sum of the other weights (A and B) the knot will assume a certain position (D), and it will be found to return to the same point as often as the experiment shall be tried, unless some one or more of the weights be changed.

According to the foregoing definitions the weights (A, B and C) are in equilibrium. A and B, as components, act upon the point D, with the same effect as their resultant C. But, the force A is equally the resultant of B and C, as components: and B may, also, be considered the resultant of A and C.

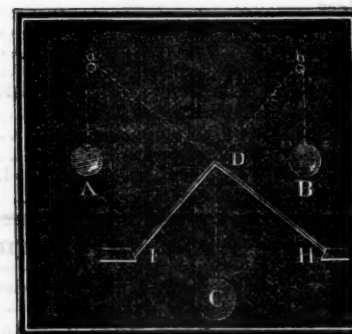
Fig. 2.



b. If a rod be fixed vertically between the point D and the ceiling—or some other immovable object (G), then by removing the weight C the point D remains in the same position as before.

The pressure upon the rod will be equal to the weight C removed, and is the resultant of the weights A and B.

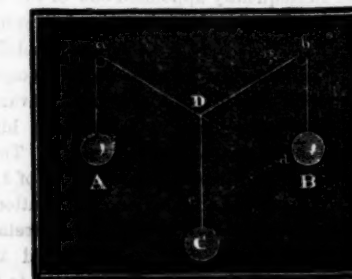
Fig. 3.



c. The point D, instead of being supported by weights, acting in the direction Da and Db, may be sustained by rods or struts (DF and DH,) pressing against it. The same weight (C) being suspended from the point D, the rod DF will sustain a force equal to that which was in the former case exerted by the weight B in the direction Db; and DH a force equal to that which was exerted by the weight A in the direction Da.

§ 7. If three forces act upon one point, and keep it at rest, then those three forces are proportional to the three sides of a triangle, to which sides, also, the directions in which they act are parallel.

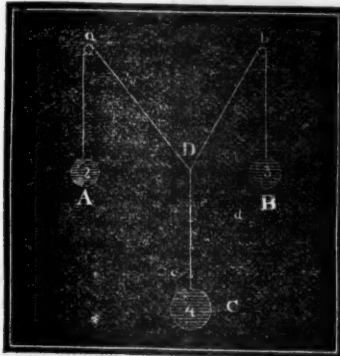
Fig. 4.



d. Let the weights (A, B and C,) be equal.

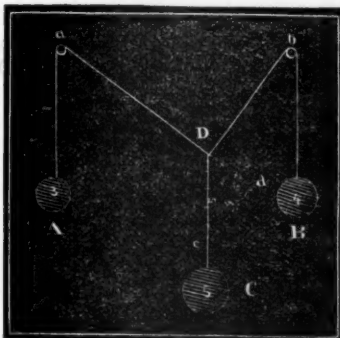
It will be found that the knot (D) will take such a position that the angles about it (aDb , aDc and bDc) will be equal. By projecting the lines or cords upon the wall, producing aD to any point d , and drawing cd parallel to Db , it will also be found that the sides of the triangle (cdD) are equal.

Fig. 5.



e. Let the weights (A, B and C) be in proportion to each other respectively, as 2, 3 and 4.—The knot will assume the position D. Upon DC, with any scale, lay off 4 and construct the triangle (cdD), by producing aD to d , and drawing cd parallel to Db . It will be found that, upon the application of the same scale, 2 will be the measure of the side Dd , and 3 of the side cd .

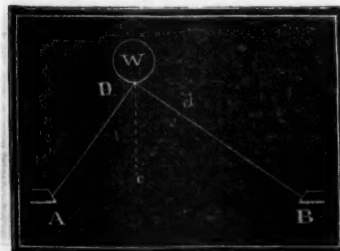
Fig. 6.



f. Let the weights (A, B and C) be to each other as 3, 4 and 5, and, constructing the triangle as before, it will now be found that the sides will be in proportion to 3, 4 and 5.

§ 8. It follows, then, if a body be kept at rest by three forces, and any two of them be represented in magnitude and direction by two sides of a triangle, the third side of the same triangle will represent the magnitude and direction of the other force.

Fig. 7.



g. The weight (W) may act upon the point D

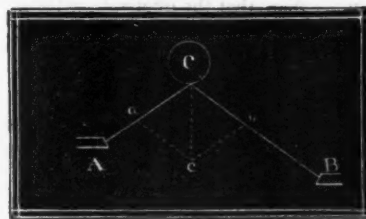
by pressure, instead of being suspended, as in the last case. It is evident that if the weight (W) acts upon the point D in the same direction, and with the same force, as if suspended, then it must require the same force to be exerted by AD and BD to sustain it. If, therefore, it be required to know what force each of the supports (AD and BD) must sustain, in consequence of the pressure of the weight (W), draw the vertical line Dc of a convenient length to represent the weight (W), then from the point c , draw cd parallel to AD, and, as in the former case, cd will represent the force which must be exerted by AD, and Dd will represent that which must be exerted by BD.

§ 9. The most common direction of any force is that of gravity, acting perpendicularly toward the earth.

§ 10. When the line representing the direction and force of gravity, or any other force, bisects the angle subtended by the lines, representing the direction of two other forces, or pressures, those two pressures are equal.

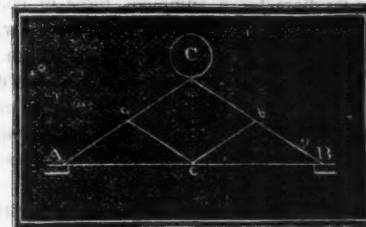
This principle applies especially in the most simple form of truss for roofs and bridges.

Fig. 8.



h. Let the line Cc bisect the angle ACB . If Cc represent the weight (W) acting upon the vertex of the braces, or rafters, (CA and CB) then Ca will represent the pressure in the direction CA, and Cb will represent that in the direction CB.

Fig. 9.



Ca and Cb will be found to be equal to each other without regard to the lengths of the braces, or rafters.

§ 11. When a force acts upon timber, iron or other material, in the direction of its length, in such manner as tends to pull it asunder, this force is said to act by *tension*; the material thus acted upon is sometimes called a *tie*, *tie-beam*, *king-post*, *suspension rod*, etc., etc., and the strength of the material to resist this force or strain, is called its *direct cohesion*.

§ 12. The direct cohesion of timber and iron is ascertained by suspending vertically, a rod of known dimensions by one end, and attaching weights to the other, until it breaks. It is usually expressed by the number of pounds necessary to tear asunder pieces an inch square.

§ 13. A few results are collected together in the following table.

TABLE I.
Direct cohesion of different kinds of Timber, Iron, etc.

| Kind of Material. | Specific Gravity. | Cohesion of a square inch, in lbs. | Remarks. | Authority. |
|--------------------------------|-------------------|------------------------------------|-------------------------|------------------|
| Ash timber | .602 | 17,077 | Mean of 6 experiments. | Barlow. |
| Beech do. | .702 | 11,467 | Do. 3 do. | do. |
| Chestnut do. | .610 | 10,500 | ..... | Bevan. |
| Ash | .753 | 14,130 | ..... | Tredgold. |
| Beech | .690 | 12,225 | ..... | do. |
| Chestnut dry | .535 | 10,656 | ..... | do. |
| Cedar | .540 | 11,400 | ..... | Bevan. |
| Elm | .544 | 9,720 | ..... | Tredgold. |
| Fir | .581 | 12,203 | Mean of 12 experiments. | Barlow. |
| Locust ..... | ..... | 20,100 | ..... | Muschenbroek. |
| Oak, Am. white ..... | ..... | 14,054 | ..... | ..... |
| Oak, American | .867 | 10,253 | ..... | Tredgold. |
| Oak, English | .845 | 10,389 | Mean of 6 experiments. | Barlow. |
| Pine, white | .460 | 11,835 | (Pinus strobus) | Tredgold. |
| Do. pitch | .660 | 9,796 | (Pinus resinosa) | do. |
| Norway Pine ..... | ..... | 7,287 | ..... | Rondelet. |
| Do. do. .... | ..... | 14,300 | ..... | Bevan. |
| Poplar | .380 | 7,200 | ..... | do. |
| Spruce, Am. white | .465 | 10,296 | (Pinus alba) | Tredgold. |
| Do. Norway | .512 | 12,346 | Christiania white deal. | do. |
| French bar iron ..... | ..... | 61,041 | ..... | Perronet. |
| German do. do. .... | ..... | 69,133 | ..... | Muschenbroek. |
| American { Missouri | 7,771 | 47,909 | Mean of 22 experiments. | ..... |
| Tennessee | 7,805 | 52,099 | do. 21 do. | ..... |
| bar iron. { Pennsylvania | 7,740 | 58,400 | do. 15 do. | Made by com- |
| Salisbury ..... | ..... | 53,009 | do. 40 do. | mittee of the |
| English bar iron | 7,690 | 59,108 | do. 5 do. | Franklin In- |
| Russian do. do. | 7,801 | 76,069 | do. 5 do. | stitut'e for th- |
| Swedish do. do. | 7,478 | 58,184 | do. 2 do. | U. S. Treas- |
| Phillipsburg wire ..... | ..... | 84,186 .383 | 13 do. | ury Depart- |
| ..... | ..... | 73,888 .190 | 5 do. | ment. |
| ..... | ..... | 89,162 .156 | 5 do. | ..... |
| Cast steel ..... | ..... | 130,681 | 1 do. | ..... |
| American cast iron ..... | ..... | ..... | ..... | ..... |
| English do. do. | 7,059 | 16,283 | Mean of 76 experiments. | Hodgkinson. |

§ 14. When a force tends to compress the material in the direction of its length, this force is said to act by *compression* or *thrust*, and the material so acted upon, is variously designated, as a *column*, *strut*, *brace*, *rafter*, *straining beam*, etc., etc.

§ 15. A piece of timber exposed to compression, yields to the force differently, according to the proportion between its length and sectional area. If a cylinder have its length more than eight or ten times its diameter, a sufficient force of compression acting in the direction of its length will bend and break it near the middle of its length.

When the length is less, in proportion to the diameter, the piece will split in several places, and bulge out in the middle; or, if the length be very short in proportion to the diameter, the piece will be crushed.

§ 16. The resistance to compression under the various circumstances cannot be ascertained, accurately, without an expensive apparatus, and not many reliable experiments of this kind appear to have been made. A few, however, which seem to be well authenticated give the following results.

TABLE II.

| Kind of Material. | Length in feet. | Breadth in inches. | Thickness in do. | Weight applied. | Result. |
|--------------------|-----------------|--------------------|------------------|-----------------|-----------------|
| Elm..... | 1 | 1 | 1 | 10,331 | Crushed. |
| American Pine..... | 1 | 1 | 1 | 5,400 | do. |
| English Oak..... | 1 | 1 | 1 | 3,860 | do. |
| Do. do..... | 1 | 1 | 1 | 5,147 | do. |
| African do..... | 6 | 3 | 3 | 60,480 | do. |
| Oak seasoned..... | 2 | 2 | 2 | 7,856 | Prod.deflect'n. |
| Do..... | 2 | 2 | 2 | 15,631 | Broke. |
| Do..... | 4 | 2 | 2 | 6,298 | Prod.deflect'n. |
| Do..... | 4 | 2 | 2 | 11,844 | Broke. |
| Do..... | 6 | 2 | 2 | 3,277 | Prod.deflect'n. |
| Do..... | 6 | 2 | 2 | 7,244 | Broke. |
| Do..... | 8 | 2 | 2 | 26,381 | Prod.deflect'n. |
| Do..... | 8 | 6.15 | 4.17 | 50,448 | Broke. |
| Ash..... | 1 | 1 | 1 | 9,368 | Crushed. |
| Beech..... | 1 | 1 | 1 | 9,363 | do. |
| Birch..... | 1 | 1 | 1 | 11,663 | do. |
| Cedar..... | 1 | 1 | 1 | 5,768 | do. |
| Mahog.Spanish..... | 1 | 1 | 1 | 8,198 | do. |
| Oak Quebec..... | 1 | 1 | 1 | 5,982 | do. |
| Poplar..... | 1 | 1 | 1 | 5,124 | do. |
| Spruce..... | 1 | 1 | 1 | 6,844 | do. |
| Sycamore..... | 1 | 1 | 1 | 7,082 | do. |
| Walnut..... | 1 | 1 | 1 | 6,645 | do. |
| Yellow Pine..... | 1 | 1 | 1 | 5,375 | do. |

§ 17. When a force acts upon a material transversely to its length, either perpendicularly or obliquely, it is said to act *laterally*, or to produce a *transverse strain*.

The material, when supported horizontally, and acted upon vertically, is usually denominated a *Beam*.

§ 18. The *transverse strength* of a beam, is its power to resist fracture when laid horizontally upon supports at its extremities, and loaded with a weight, or weights, at some point or points between its bearings. The simplest case is when a weight is placed upon, or suspended from, the middle of the beam.

§ 19. The *strength of beams* subjected to transverse strains, will depend, not only upon the absolute strength of the timber, but, also, upon the *length, breadth and depth*.

By numerous experiments, the true relations existing between the dimensions and the strength of beams, have been discovered.

§ 20. The strength of a beam is increased when the breadth or depth is increased, and the proportion is said to be *direct*; but if the length of the beam be increased, the strength will be diminish-

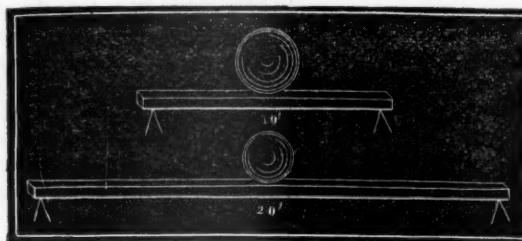
ed, and the proportion between them is then said to be *inverse*.

§ 21. The strength of a beam supported at both ends and loaded in the middle, is *inversely as its length*.

Consequently the products of length into breaking weight, will be the same for all beams of the same breadth, depth and kind of material.

1. If a weight of 9,570 lbs., resting upon the middle of a white pine beam 10 feet long and 6

Fig. 10.

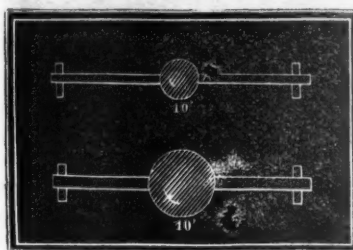


inches square, produce fracture; then one-half the weight, or 4,785 lbs., will break a beam 20 feet long, the other dimensions and the material being the same; for $10 \times 9,570 = 20 \times 4,785$.

§ 22. The strength of a beam, supported at both ends and loaded in the middle, is in *direct proportion to its breadth*.

It follows then, that the quotients, arising from the division of the breaking weight by the

Fig. 11.



breadth, will be equal in all cases of beams of the same length, depth and kind of material.

j. A white oak beam 10 feet long, 6 inches deep and 3 inches in breadth, broke with a weight of 7,668 lbs. on the middle. Had the same beam been 6 inches in breadth, the weight sustained would have been double, or 15,336 lbs.:

for 3 inches : 6 inches :: 7,668 lbs. : 15,336 lbs.
and $\frac{7,668}{3} = \frac{15,336}{6}$.

§ 23. The strength of a beam supported at the ends and loaded in the middle, is *inversely as its length*, and *directly as its breadth*. Therefore: the product of length into the breaking weight divided by the breadth, gives a quotient which will be the same for all beams of the same depth and material.

k. A white oak beam 10 feet long, 6 inches deep and 4 inches in breadth, broke with 10,224

Fig. 12.

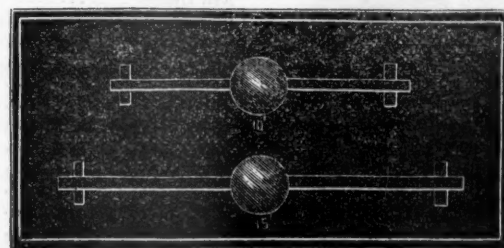


Fig. 13.



lbs. A beam of the same depth and material, 15 feet long and 6 inches in breadth, will break under the same weight:

$$\text{for } \frac{10 \times 10,224}{4} = \frac{15 \times 10,224}{6}$$

§ 24. The strength of a beam of a given length, and breadth, is *as the square of its depth*.

The quotients, arising from the division of the breaking weights by the square of the depth, will then be the same in all cases where the lengths, breadths and material are the same.

The length of a beam is usually expressed in feet,—the breadth and depth in inches. The square of the depth is, then, the depth in inches multiplied by itself.

l. A beam of spruce 12 feet long, 3 inches broad and 6 inches deep, broke with 4,338 lbs.

A beam 9 inches deep,—the other dimensions and the material being the same—will break with 9,760 lbs.

If 12 inches deep, it will break with 17,352 lbs.; or if 15 inches deep, with 27,112 lbs. weight: for

$$\frac{4,338}{6 \times 6} = \frac{9,760}{9 \times 9} = \frac{17,352}{12 \times 12} = \frac{27,112}{15 \times 15}$$

§ 25. The strength of one beam is to the

strength of another, of equal length and of the same material, as the product of the breadth into the square of the depth of the former, is to the product of the breadth into the square of the depth of the latter.

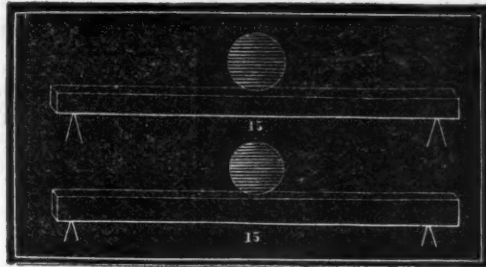
Consequently, dividing the breaking weight, by

the product of the breadth into the square of the depth, gives a quotient which will be the same for all beams of the same length and material.

m. A beam of Elm 15 feet long, 5 inches wide and 10 inches deep, broke with 18,000 lbs.

Another beam of the same timber, and of the

Fig. 14.



same length,—4 inches wide and 12 inches deep, will break with 20,736 lbs: for

$$5 \times 10 \times 10 : 4 \times 12 \times 12 :: 18,000 : 20,736, \text{ and}$$

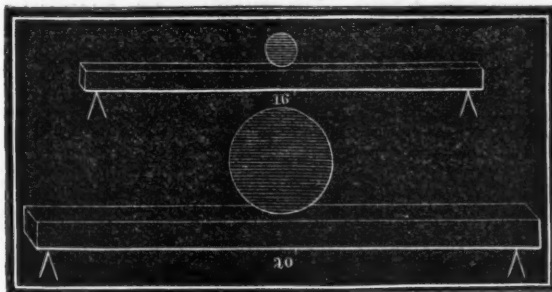
$$\frac{18,000}{5 \times 10 \times 10} = \frac{20,736}{4 \times 12 \times 12}$$

§ 26. The strength of beams, supported at both ends and loaded in the middle, is *inversely* as their lengths, and *directly* as their breadths

and the squares of their depths: or, in other words, the strength of one beam, is to the strength of another, as the product of the breadth into the square of the depth divided by the length of one to the same product of the other.

It follows also, that if the products of the length into the breaking weight, be divided by the product of the breadth into the square of the

Fig. 15.



depth, the quotient will be the same, for all beams of the same material.

n. A beam of Southern Pine 16 feet long, 9 inches deep and 4 inches in breadth, broke with 15,957 lbs.

Another beam of the same timber, 20 feet long, 15 inches deep and 10 inches in breadth will break with 88,650 lbs.: for

$$\frac{4 \times 9 \times 9}{16} : \frac{10 \times 15 \times 15}{20} :: 15,957 : 88,650,$$

$$\text{and } \frac{16 \times 15,957}{4 \times 9 \times 9} = \frac{20 \times 88,650}{10 \times 15 \times 15}$$

§ 27. When the whole load is applied at any point of a beam, between its supports, the weight producing fracture will be *inversely* as the products of the two segments of the beam:—that is, of the distances from the weights to the two points of support of the beam.

o. A stick of chestnut 12 feet long, 6 inches in breadth and 8 inches deep, broke with 14,400 lbs. applied at the centre.

Required the breaking weight if applied at one foot from the centre. Then

$$7 \times 5 : 6 \times 6 :: 14,400 : 14,811 \text{ lbs.}$$

Required the breaking weight, if applied at two feet from the centre,

$$8 \times 4 : 6 \times 6 :: 14,400 : 16,200 \text{ lbs.}$$

If applied at 3 feet from the centre,

$$9 \times 3 : 6 \times 6 :: 14,400 : 19,200 \text{ lbs.}$$

§ 28. The lateral strength of a beam when uniformly loaded throughout its length, will be twice as great as when loaded in the middle.

§ 29. When both ends of a beam are firmly fixed, as in a solid wall, the lateral strength will be to that of a beam with its ends only supported, as 8 to 2.

§ 30. The lateral strength of a beam with its narrow face upward, is to its strength with its broadest face upward, as the breadth of the broadest face, to the breadth of the narrow face.

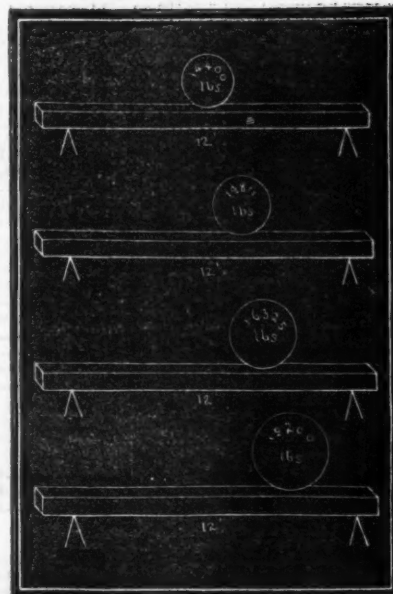


Fig. 16.

§ 31. The lateral strength of square beams, of the same length and material, are as the cubes of one side—that of round beams or cylinders, as the cubes of their diameters.

(To be continued.)

Coal Burning on the Baltimore and Ohio Railroad.

We give below an extract from the report of the Master of Machinery on the Baltimore and Ohio railroad, accompanying the Report of the company, on the use of Coal on Locomotive Engines.

"The introduction of Coke as a fuel for our passenger engines, has been attended with entire success, resulting in very economical and efficient operations of these machines. A series of experiments has been made with raw coal upon the passenger engines, with results of a satisfactory character; showing that our passenger trains, containing five cars, can be drawn over the 1st divisions of the road, overcoming grades of 83 feet per mile, with a consumption of 26 lbs. of coal per mile run—costing, including all transportation charges on the coal, three and six-tenths cents per mile."

The experiments with fuel have all been made with the same engine, No. 233. Their results were as follows:

"Cost per mile on the Mail and Express trains, 5 cars:

| | |
|-----------------|---------------|
| With Wood,..... | 7 8-10 cents. |
| " Coke,..... | 5 6-10 " |
| " Coal,..... | 3 6-10 " |

According to this calculation, the cost of running a train as above, for fuel alone, to Harper's Ferry from Baltimore, 81 miles,

| | |
|--------------------------|------|
| With Wood, would be..... | 6.81 |
| " Coke, " "..... | 4.53 |
| " Coal, " "..... | 2.91 |

To Wheeling, 379 miles,

| | |
|-------------------------|-------|
| With Wood would be..... | 29.56 |
| " Coke, " "..... | 21.22 |
| " Coal, " "..... | 13.64 |

A saving between coal and wood of about 55 per cent. A very important item, and must command the attention of the railroad interest all over the United States, at an early day. It must be borne in mind, also, that this is putting down wood at its cost along the line of the Baltimore and Ohio road, about \$2 per cord. The Eastern roads, where wood is scarce, are paying three times this price. The result finally must be to greatly increase the demand for coal, from the Cumberland regions particularly, as companies are now endeavoring to reduce their expenses. If the fuel expense can be reduced 55 per cent. here is a heavy item of saving."

The Master of Machinery says, further:

"Fourteen of the Passenger engines are now consuming mineral fuel; others will be altered as soon as the large accumulation of wood on the Western division is sufficiently reduced to render it advisable."

Railroads in Egypt.

The railway to Suez being now completed, Egypt possesses the following lines:—From Alexandria to Cairo, 131 miles; to Mariouth, 17; to Meks, 6; to Rassateen, 3. From Tanta to Samanud there is a rail for 21 miles; from Cairo to Suez 91; to Barragod 15; to Beni Suef 76—in all, 360 miles. Besides these there are smaller branches, from Cairo to the citadel and Kasr Nin. From Samanud to Mansoura and Damietta, from Damanhour to Aste, which last extends to Rosetta. The exact mileage of these minor, but still important lines is not yet accurately known. The bridge of Kasr Zayat across the Nile is a splendid work, and must be finished by June, 1860. It bids fair to be one of the wonders of the world. When the railway system is properly developed there will be a saving of 20,000l. per annum in the expense of forwarding the Indian mail.—*Levant Herald*.

Railway Share List,

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

| NAME OF COMPANY. | Length of Road | Capital paid in. | Debt. | Total cost of road & equip't. | Gross Earnings for last official year. | Net Earnings for do. | Div'd end for do. | Price of Share. | NAME OF COMPANY. | Length of Road | Capital paid in. | Debt. | Total cost of road & equip't. | Gross Earnings for last official year. | Net Earnings for do. | Dividend for do. | Price of Share. | |
|------------------------------|----------------|------------------|------------|-------------------------------|--|----------------------|-------------------|-----------------|-------------------------------|----------------|------------------|------------|-------------------------------|--|----------------------|------------------|-----------------|-----|
| Atlantic & St. Lawrence | 149 | 2,494,900 | 3,482,000 | 6,923,941 | 545,762 | 150,224 | 6 | --- | Brunswick and Florida, Ga. | 30 | 151,887 | 463,648 | 538,640 | In progr. | --- | --- | --- | --- |
| Andromedog & Kennebec | 55 | 487,909 | 1,835,308 | 2,323,217 | 159,518 | 83,368 | --- | --- | South. Western | 143 | 1,399,100 | 441,292 | 2,269,323 | 865,214 | 208,771 | 9 | --- | --- |
| Kennebec & Portland | 72 | 1,107,528 | 1,763,738 | 2,871,266 | 218,255 | --- | --- | --- | Tennessee and Alabama | 30 | 399,764 | 626,889 | 879,906 | 53,775 | 29,405 | --- | --- | --- |
| Port, Baco, & Portmouth | 51 | 1,396,400 | --- | 1,359,373 | 253,717 | 120,909 | 6 | 90 | Tennessee and Mississ. | 64 | 757,440 | 611,812 | 1,161,152 | 161,001 | 99,888 | --- | --- | --- |
| Boston, Concord & Montreal | 93 | 1,104,586 | 2,643,977 | 3,748,563 | 324,767 | 174,025 | --- | 16 | Memphis and Charleston | 287 | 2,228,177 | 3,495,288 | 5,727,470 | 642,022 | 334,504 | --- | --- | --- |
| Cheshire | 54 | 899,313 | 1,170,687 | 2,069,999 | 113,077 | --- | --- | 6 | Mobile and Ohio | 306 | 6,784,819 | 2,066,459 | 10,701,428 | 554,382 | 278,428 | --- | --- | --- |
| Concord | 36 | 1,500,000 | 8,242 | 1,512,576 | 317,056 | 125,664 | --- | 52 | Miss. Central | 89 | 1,675,474 | 928,796 | 2,603,008 | 115,679 | --- | --- | --- | --- |
| Northern, N. H. | 82 | 3,068,400 | 406,286 | 3,068,400 | 365,880 | 136,996 | 4 | 47 1/2 | Southern (Miss.) | 82 | 1,000,000 | 1,400,000 | 2,400,000 | 264,255 | 150,789 | --- | --- | --- |
| Concord & Passumpsic Riv. | 90 | 1,000,000 | 800,000 | 1,784,146 | 177,688 | 73,401 | --- | --- | N. O. Opelousas & G. W. | 80 | 2,800,000 | 750,000 | 3,571,256 | 284,178 | 127,460 | --- | --- | --- |
| Burlington & Burlington | 117 | 2,233,376 | 4,158,765 | 6,392,141 | 332,215 | 41,688 | --- | --- | N. O. Jackson & G. N. | 206 | 4,035,000 | 1,516,610 | 7,142,561 | 189,003 | --- | --- | --- | --- |
| Vermont and Canada | 47 | 1,350,000 | --- | 1,350,000 | --- | --- | --- | --- | Victab. Shreveport & Tex. | 21 | 883,766 | 108,285 | 992,051 | In progr. | --- | --- | --- | --- |
| Vermont Central | 122 | 5,000,000 | 5,276,299 | 10,276,299 | 75,883 | 127,330 | --- | --- | East Tennessee and Ga. | 111 | 1,192,974 | 1,735,669 | 2,703,428 | 227,363 | 104,992 | --- | --- | --- |
| Boston and Lowell | 25 | 1,830,000 | 438,920 | 2,268,920 | 435,883 | 171,382 | 6 | 93 | East Tennessee and V. | 130 | 628,078 | 1,728,664 | 3,208,138 | 61,314 | 39,062 | --- | --- | --- |
| Boston and Maine | 74 | 4,078,974 | --- | 4,078,974 | 770,802 | 305,502 | 6 | 99 1/2 | Nash. and Chattanooga | 169 | 2,263,905 | 1,632,793 | 3,896,703 | 641,552 | 219,287 | --- | --- | --- |
| Boston and Providence | 43 | 3,160,000 | 239,720 | 3,399,720 | 534,176 | 245,194 | 6 | 96 1/2 | Covington & Lexington | 19 | 1,334,850 | 3,065,917 | 4,091,064 | 426,408 | 220,906 | --- | --- | --- |
| Boston and Worcester | 44 | 4,500,000 | 599,974 | 5,099,974 | 1,019,149 | 388,513 | 6 | 95 | Lexington and Frankfort | 29 | 430,055 | 158,899 | 588,255 | 95,807 | 48,718 | 6 | --- | --- |
| Cape Cod | 47 | 681,690 | 291,007 | 1,031,625 | 122,960 | 39,899 | --- | 49 1/2 | Lexington and Danville | 13 | 694,444 | 71,000 | 765,500 | In progr. | --- | --- | --- | --- |
| Connecticut River | 50 | 1,691,110 | 275,772 | 1,966,882 | 267,710 | 65,096 | 3 | 69 1/2 | Louisville and Frankfort | 65 | 1,440,450 | 625,216 | 2,065,666 | 245,760 | 109,059 | 6 | --- | --- |
| Eastern, Mass. | 60 | 2,683,400 | 2,441,373 | 5,124,773 | 616,156 | 272,479 | --- | --- | Atlantic & Gt. Western | --- | 866,939 | 77,494 | 944,433 | In progr. | --- | --- | --- | --- |
| Fitchburg | 21 | 500,000 | --- | 500,000 | 683,357 | 257,827 | 6 | 94 1/2 | Belleville and Ind. | 118 | 1,874,995 | 1,315,237 | 2,998,232 | 348,452 | 120,886 | --- | --- | --- |
| N. Bedford and Taunton | 71 | 3,015,100 | 260,100 | 3,275,200 | 88,007 | 305,140 | 6 | 101 1/2 | Clev., Col. and Cin. | 141 | 4,748,212 | 90,400 | 4,758,212 | 1,149,741 | 511,740 | 9 | 8 1/2 | --- |
| Old Colony and Fall River | 69 | 2,232,541 | 1,019,148 | 3,251,689 | 240,133 | 52,267 | --- | 13 1/2 | Cleveland and Toledo | 200 | 3,333,712 | 4,225,558 | 7,193,010 | 109,292 | 433,790 | 28 | --- | --- |
| Vermont and Mass. | 165 | 5,150,000 | 5,839,080 | 10,989,080 | 2,117,982 | 889,763 | 8 | 105 1/2 | Clev. and Mahoning | 65 | --- | --- | 1,290,951 | In progr. | --- | --- | --- | --- |
| Western, Mass. | 46 | 1,141,000 | 205,565 | 1,346,565 | 216,888 | 82,720 | 4 | 46 | Clev. and Pittsburg | 133 | 2,780,744 | 3,043,992 | 5,637,466 | 581,877 | 309,518 | --- | --- | --- |
| Worcester and Nashua | 48 | 1,510,020 | 300,000 | 1,810,020 | 344,778 | 155,044 | 7 | 87 | Clev. P. & Ashland | 95 | 3,000,000 | 1,495,548 | 4,495,548 | 1,251,538 | 581,454 | 15 | --- | --- |
| Providence and Worcester | 72 | 2,350,000 | 944,000 | 3,294,000 | 769,065 | 340,835 | 10 | 104 1/2 | Clev. Hamilton & Dayton | 60 | 2,155,800 | 1,528,092 | 3,130,315 | 487,421 | 260,763 | --- | --- | --- |
| Hartford and N. Haven | 122 | 1,936,246 | 1,182,692 | 3,118,938 | 205,906 | 112,325 | --- | --- | Cin. Wilm. & Zanesville | 131 | 2,121,176 | 3,782,040 | 6,696,210 | 223,506 | 30,288 | --- | --- | --- |
| Hartford, Prov. and Fishkill | 74 | 2,000,000 | 423,885 | 2,423,885 | 318,476 | 109,344 | --- | --- | Columbus and Xenia | 55 | 1,490,450 | 149,000 | 1,639,450 | 403,212 | 181,888 | 10 | --- | --- |
| Housatonic | 57 | 1,031,800 | 524,244 | 1,556,044 | 237,416 | 114,237 | --- | --- | Dayton, Xen. & Belpre | 63 | 437,838 | 422,658 | 860,496 | In progr. | --- | --- | --- | --- |
| Naugatuck | 62 | 2,980,836 | 2,323,240 | 5,304,076 | 1,157,055 | 254,569 | 3 | 45 | Dayton and Michigan | 140 | 1,076,002 | 993,011 | 1,185,826 | In progr. | --- | --- | --- | --- |
| N. York and N. Haven | 50 | 738,268 | 761,462 | 1,500,000 | 88,007 | 30,318 | --- | --- | Dayton and Western | 35 | 310,000 | 700,481 | 1,038,173 | 125,940 | 65,253 | --- | --- | --- |
| N. Haven and N. London | 60 | 510,700 | 1,052,000 | 1,562,700 | 120,571 | 51,544 | --- | --- | Raton and Hamilton | 42 | 459,763 | 832,668 | 1,176,163 | 140,936 | 50,008 | --- | --- | --- |
| N. London, W. & Palmer | 66 | 1,122,300 | 724,183 | 1,846,483 | 268,392 | 114,547 | --- | 31 | Little Miami | 65 | 2,691,282 | 1,266,000 | 3,925,157 | 775,442 | 290,123 | 10 | 8 1/2 | --- |
| Norwich and Worcester | 32 | 439,005 | 1,625,098 | 2,064,103 | 117,718 | 9,904 | --- | --- | Sandusky, Dayton & Cin. | 171 | 1,627,907 | 3,368,000 | 6,065,000 | 682,614 | --- | --- | --- | --- |
| Albany Northern | 35 | 643,330 | 317,353 | 960,683 | In progr. | --- | --- | --- | Central Ohio | 138 | 1,627,907 | 6,223,656 | 10,496,822 | 570,092 | 164,697 | --- | --- | --- |
| Black River and Utica | 100 | 1,487,874 | 1,501,183 | 2,988,957 | 172,476 | 66,333 | --- | --- | Pittsb. Ft. Wayne & Chicago | 423 | 6,247,040 | 9,822,560 | 14,279,704 | 1,646,369 | 617,787 | 10 | --- | --- |
| Buffalo, Corn. and N. Y. | 92 | 798,439 | 2,537,849 | 3,336,288 | 288,392 | 31,896 | --- | --- | Pittsb. Mayor's & Cin. | 127 | 1,350,000 | 2,206,357 | 3,552,357 | 328,958 | 164,479 | --- | --- | --- |
| Buffalo and N. Y. City | 69 | 1,300,000 | 1,040,000 | 2,340,000 | 679,750 | 355,763 | --- | --- | Sand'y, Manaf. & Newk. | 56 | 403,675 | 509,050 | 988,858 | In progr. | --- | --- | --- | --- |
| Buffalo and St. Line | 47 | 434,111 | 922,393 | 1,356,504 | 174,089 | 69,506 | --- | --- | Scioto & Hocking Valley | 113 | 1,000,000 | 950,000 | 2,194,000 | Recently opened. | --- | --- | --- | --- |
| Canandaigua and Elmira | 95 | 1,315,000 | 2,279,854 | 3,594,854 | 135,433 | 48,649 | --- | --- | Tol. Wabash & St. Louis | 242 | 2,965,100 | 7,571,500 | 10,536,600 | In progr. | --- | --- | --- | --- |
| Canandaigua & Niagara F's | 38 | 897,000 | 506,689 | 1,403,689 | 135,433 | 48,649 | --- | --- | Cin. Log. and Chicago | 255 | 4,186,679 | 1,006,125 | 2,080,433 | 249,863 | 124,140 | --- | --- | --- |
| Cayuga & Susquehanna | 144 | 8,758,466 | 9,250,362 | 17,998,828 | 868,380 | --- | 34 | --- | Evansville & Crawfordsv. | 109 | 985,061 | 1,270,872 | 2,155,718 | 249,863 | 124,140 | --- | --- | --- |
| Endless River | 95 | 8,000,000 | 647,192 | 8,647,192 | 302,156 | 168,180 | 10 1/2 | --- | Ind. and Cincinnati | 88 | 1,680,809 | 1,684,584 | 3,029,989 | 491,743 | 245,022 | 7 | --- | --- |
| Long Island | 562 | 24,182,400 | 14,492,663 | 38,675,063 | 5,243,607 | 1,454,032 | 7 1/2 | --- | Indiana Central | 60 | 612,560 | 1,261,179 | 1,909,911 | 268,189 | 204,685 | --- | --- | --- |
| New York Central | 464 | 11,000,000 | 28,081,468 | 39,081,468 | 742,607 | 1,454,032 | 10 1/2 | --- | Ind. Clev. & Pittsburg | 83 | 855,791 | 1,071,694 | 1,826,425 | 232,737 | 94,318 | --- | --- | --- |
| New York and Erie | 138 | 5,717,100 | 4,822,498 | 10,539,598 | 1,040,393 | 324,891 | --- | 12 1/2 | Jeffersonville | 87 | 1,014,252 | 684,000 | 1,698,252 | 280,214 | 118,028 | --- | --- | --- |
| New York and Harlem | 118 | 1,633,022 | 4,406,874 | 6,040,000 | 620,153 | 135,754 | --- | 1 | Madison and Indianapolis | 87 | 1,647,700 | 1,936,816 | 2,994,516 | 645,827 | 371,402 | --- | --- | --- |
| Northern, N. Y. | 35 | 306,130 | 213,035 | 519,165 | 149,373 | 78,784 | --- | --- | New Albany and Salem | 288 | 2,535,121 | 6,281,348 | 7,029,494 | 1,029,400 | 80,000 | --- | --- | --- |
| Oswego and Syracuse | 29 | 467,200 | 294,189 | 761,389 | 241,149 | 82,600 | --- | --- | Pera and Indianapolis | 73 | 1,361,450 | 558,314 | 1,685,509 | 451,272 | 206,079 | 10 | --- | --- |
| Potomac and Watertown | 25 | 610,000 | 140,000 | 750,000 | 171,909 | 22,008 | --- | --- | Terre Haute and Ind. | 182 | 6,248,000 | 1,734,318 | 6,828,272 | 1,886,190 | 850,039 | --- | --- | --- |
| Rensselaer & Saratoga | 48 | 500,000 | 396,600 | 896,600 | 159,484 | 22,503 | --- | --- | Chicago and Rock Land | 210 | 4,631,540 | 3,582,970 | 8,042,428 | 1,605,167 | 81,767 | --- | --- | --- |
| Saratoga and Whitehall | 80 | 768,369 | 1,578,804 | 2,347,173 | 159,484 | 22,503 | --- | --- | Chicago, Burl. and Quincy | 178 | 2,300,000 | 1,325,000 | 3,625,000 | --- | --- | --- | --- | --- |
| Syracuse & Binghamton | 27 | 437,830 | 757,079 | 1,194,909 | 159,484 | 55,184 | --- | --- | Ohio, St. Paul & Ind. La. | 259 | 6,023,900 | 3,999,015 | 9,396,455 | 2,315,786 | 1,192,042 | 8 | 67 1/2 | --- |
| Troy and Boston | 64 | 1,500,000 | 1,619,000 | 3,119,000 | 448,393 | 114,633 | --- | 50 | Illinois Central | 704 | 6,656,435 | 20,311,962 | 25,437,669 | 253,966 | 565,972 | --- | --- | --- |
| Watertown and Rome | 94 | 3,000,000 | 11,407,200 | 14,407,200 | 1,640,787 | 594,114 | 12 | 120 | Pera and Oklawaha | 147 | 1,569,889 | 3,292,403 | 4,862,292 | Recentl'y opened. | --- | --- | --- | --- |
| Beaumont and Amboy | 60 | 3,485,000 | 1,560,854 | 5,045,854 | 1,173,171 | 534,651 | --- | 136 | Ohio & Miss. (Wat. Dr.) | 208 | 3,011,150 | 9,925,927 | 14,872,784 | 823,767 | 247,757 | --- | --- | --- |
| Boston and Atlantic | 30 | 3,485,000 | 788,844 | 4,273,844 | 682,940 | 367,193 | --- | --- | Terre Haute, Alt. & St. Louis | 185 | 838,000 | 1,128,964 | 1,966,964 | Recentl'y opened. | --- | --- | --- | --- |
| New Jersey Central | 53 | 1,167,805 | 340,000 | 1,507,805 | 237,756 | 101,542 | --- | --- | Detroit and Milwaukee | 282 | 6,057,840 | 8,366,639 | 12,847,238 | 2,448,758 | 764,995 | 8 | 50 1/2 | --- |
| Morris and Essex | 44 | 1,571,900 | 609,046 | 2,180,946 | 1,700,000 | 45,000 | --- | --- | Mich. South. & N. Ind. | 475 | 8,776,400 | 10,459,499 | 19,336,084 | 2,309,487 | 544,311 | 13 1/2 | --- | --- |
| Alleghany Valley | 53 | 1,700,000 | 1,940,000 | 3,640,000 | 219,253 | 62,450 | --- | --- | Green Bay, Mi. & Ch. | 40 | 1,000,000 | 780,000 | 1,780,000 | --- | --- | --- | --- | --- |
| Catawba, W. & Erie | 52 | 1,018,900 | 213,509 | 1,232,409 | 156,453 | 77,92 | --- | --- | Milwaukee and Miss. | 235 | 3,440,073 | 4,610,555 | 8,051,258 | 882,511 | 372,691 | --- | --- | --- |
| Cumberland Valley | 170 | 3,292,772 | 619,451 | 3,912,223 | 815,768 | 41,139 | 6 | 45 | Milwaukee & Water'n | 72 | 354,861 | 132,000 | 486,861 | In progr. | --- | | | |

Railroad Bonds.

Cincinnati Stock Sales.

By KIRK & CHEEVER.

For the week ending April 4, 1859.

| BONDS. | | Per cent. |
|--|-----|-----------------|
| Little Miami, 1st Mort. | 80 | 85 1/2 and int. |
| Cornington and Lexington, 1st Mortgage | 75 | 85 |
| Do. do. 2d do. | 75 | 80 |
| Do. do. Income | 100 | 10 |
| Ohio & Miss., E. D., Construction | 75 | 85 |
| Cinc., Ham. and Dayton, 1st Mortgage | 75 | 90 |
| Do. do. 2d do. | 75 | 82 |
| Indiansp. & Cincinnati, do. do. | 75 | 80 |

STOCKS.

| | |
|-------------------------------|----|
| Cincinnati, Hamilton & Dayton | 58 |
| Columbus and Xenia | 88 |
| Indianapolis & Cincinnati | 57 |
| Little Miami | 90 |
| Ohio and Mississippi (E. D.) | 3 |

Railroad Earnings.

The receipts of the Grand Trunk Railway of Canada for the week ending March 19, were \$47,565 51
 Week ending March 20, 1858 45,711 88

Increase \$1,853 63
 Total traffic from July 1st. \$1,616,840 88
 Same period last year 1,703,436 10

Decrease \$86,595 72
 The earnings of the Hudson River railroad in March, were \$175,773 23
 March 1858. 179,423 33

Decrease \$3,650 15
 The receipts of the Brooklyn City railroad company in March, were \$35,822 65
 March 1858. 26,508 47

Increase \$9,314 18
 The earnings of the Chicago, Burlington and Quincy railroad proper, and the Galesburg branch, for March, were as follows:

| | Chicago and Burlington. (210 miles.) | Quincy and Chicago. (100 miles.) |
|-------------------|--------------------------------------|----------------------------------|
| Freight | \$47,392 01 | \$12,947 99 |
| Passengers | 40,921 47 | 15,587 06 |
| Mails etc. | 1,750 33 | 872 33 |
| Total | \$90,063 81 | \$29,407 38 |
| Receipts per mile | 428 87 | 294 07 |

The earnings of the Buffalo, New York and Erie railroad from Buffalo to Corning, 142 miles, for March, were:
 Passengers \$11,174 09
 Freight 35,949 88
 Other sources 1,540 17

The earnings of the Michigan Southern railroad for March, were:
 1858 1859.
 Passengers \$81,878 73 \$71,896 99
 Freight 61,966 08 60,600 73
 Express and Miscell's. 12,132 91 5,372 91
 Mail 4,635 14 4,588 41

Total \$160,612 86 \$142,454 07
 Decrease in 1859 \$18,158 79

Inauguration of the Tehuantepec Railroad.

On the 5th ultimo, Mr. W. H. Slidell, Chief Engineer of the Louisiana Tehuantepec company, accompanied by the Governor or *Gefe Politico* of the district, Don Porfirio Diaz, the District Judge, Don Nicolas Garrido, the *cura* of Tehuantepec, Father Mauricio Lopez, the ex-city Judge, Don Juan Avendano, the United States Consul, C. R. Webster, Esq., and a party of attaches of the company, and invited guests, celebrated the inauguration of the Tehuantepec railroad, at Huilotepec, on the Tehuantepec river. Mr. Slidell, Father Lopez and Gov. Diaz made speeches on the occasion, and the work was commenced amid the vivas of the soldiers, citizens and native laborers and the hurrahs of the Americans. The very best

| NAMES OF COMPANIES. (The following quotations are at interest.) | Amount of Loan. | Description of Bonds. | Rate Int. | Interest payable. | Where payable. | Due. | Offered. | Asked. |
|--|-----------------|------------------------------------|-----------|-------------------|----------------|---------|----------|---------|
| Alabama and Tennessee River | \$883,000 | 1st mortgage, convertible | 7 | 1st Jan. 1st July | N.Y. | 1872 | 80 | |
| Buffalo and State Line | 500,000 | Do. inconvertible | 7 | April, October | " | 1866 | 90 | |
| Bellevue and Indiana | 600,000 | Do. convertible | 7 | Jan'y, July | " | 1866 | 75 | |
| Do. do. | 200,000 | Real estate, convertible | 7 | Jan'y, July | " | 1868 | | |
| Do. do. | 200,000 | Income, guar. Cl. Col. & Cin. | 7 | Feb'y, August | " | 1869 | | |
| Central Ohio | 1,250,000 | 1st mort. conv. east sec. | 7 | Divers | " | 1861-64 | 80 | 70 |
| Do. do. | 800,000 | 2d do. inconvertible | 7 | March, Sept. | " | 1865 | 40 | 42 |
| Cincinnati, Hamilton, and Dayton | 500,000 | 1st mortgage inconvertible | 7 | 20 Jan. 20 July | " | 1867 | 90 | 92 1/2 |
| Do. do. | 465,000 | 2d do. do. | 7 | May, Novemb. | " | 1869 | 79 | 79 1/2 |
| Cincinnati and Marietta | 2,500,000 | 1st mortgage, conv. till 1862 | 7 | Jan'y, July | " | 1868 | | |
| Cincinnati, Wilmington, and Zanesville | 1,300,000 | Do. convertible | 7 | May, Novemb. | " | 1862 | 98 | 100 |
| Cleveland, Fairview, and Ashtabula | 567,000 | Do. inconvertible | 7 | Feb'y, August | " | 1861 | 67 1/2 | 75 |
| Cleveland and Pittsburgh | 800,000 | Do. convertible | 7 | Feb'y, August | " | 1860 | 60 | 67 |
| Do. do. | 1,200,000 | Do. on Branches | 7 | March, Sept. | " | 1873 | 75 | 80 |
| Cleveland and Toledo | 525,000 | Do. inconvertible | 7 | Feb'y, August | " | 1863 | 30 | 50 |
| Chicago and Mississippi | 800,000 | Do. conv. till 1857 | 7 | April, October | " | 1862-72 | 30 | 60 |
| Do. do. | 1,200,000 | Do. inconvertible | 7 | April, October | " | 1862-72 | 60 | 65 |
| Cornington and Lexington | 400,000 | Do. do. | 6 | April, October | " | 1867 | 47 | 55 |
| Do. do. | 1,000,000 | 2d mortgage, convertible | 7 | March, Sept. | " | 1863 | 89 1/2 | 91 |
| Delaware, Lackawanna, and Western | 1,500,000 | 1st mortgage, do. | 7 | April, October | " | 1875 | 77 | 78 |
| Florida Free Land | 1,500,000 | Do. not convertible | 7 | March, Sept. | " | 1891 | | |
| Fort Wayne and Chicago | 1,250,000 | Do. conv. till 1863 | 7 | Jan'y, July | " | 1873 | 92 | 94 |
| Galeta and Chicago | 2,000,000 | Do. inconvertible | 7 | Feb'y, August | " | 1863 | 90 1/2 | 91 1/2 |
| Do. do. | 2,000,000 | 2d mortgage, do. | 7 | May, Novemb. | " | 1876 | | |
| Great Western (Illinois) | 1,000,000 | 1st mortgage, do. | 10 | April, October | " | 1868 | 87 1/2 | 93 |
| Green Bay, Milwaukee, and Chicago | 400,000 | Do. convertible | 8 | 10 April, 10 Oct. | " | 1863 | | |
| Jeffersonville | 300,000 | Do. 2d sec. inconv. | 8 | April, October | " | 1873 | | |
| Indiana Central | 600,000 | Do. convertible | 7 | May, Novemb. | " | 1866 | | 85 |
| Indianapolis and Bellefontaine | 450,000 | Do. do. | 7 | Jan'y, July | " | 1860-61 | 70 | 80 |
| Indiana & Cin'ti (for Lawb. & U. M.) | 500,000 | Do. conv. till 1857 | 7 | March, Sept. | " | 1866 | 83 | 87 |
| La Crosse and Milwaukee | 950,000 | 1st mort. 1st sec. conv. till 1864 | 8 | May, Novemb. | " | 1874 | 75 | 85 |
| Lake Erie, Wabash, and St. Louis | 3,400,000 | 1st mortgage, conv. till 1859 | 7 | Feb'y, August | " | 1865 | 71 | 72 |
| Little Miami | 1,500,000 | Do. inconv. | 6 | 2 May, 2 Nov. | " | 1863 | 83 | 86 |
| Michigan Central | 1,000,000 | No mortgage, convertible | 8 | April, October | Boat | 1860 | 96 | 97 |
| Do. do. | 800,000 | Do. do. | 8 | March, Sept. | " | 1869 | 92 | 93 |
| Milwaukee and Mississippi | 600,000 | 1st mort. 1st sec. conv. till 1857 | 8 | Jan'y, July | N.Y. | 1862 | | 80 |
| Do. do. | 650,000 | Do. 2d do. | 8 | April, October | " | 1863 | | 77 1/2 |
| Do. do. | 1,250,000 | Do. 3d do. | 8 | June, Decemb. | " | 1877 | 67 | 72 1/2 |
| New Albany and Salem | 500,000 | Do. 1st section | 10 | April, October | " | 1868-62 | | 90 |
| Do. do. | 2,325,000 | Do. oth. sec. con. till 1858 | 8 | May, Novemb. | " | 1864-75 | | 75 |
| Northern Cross | 1,200,000 | 1st mortgage, convertible | 8 | Jan'y, July | " | 1873 | | 90 |
| Ohio and Indiana | 1,000,000 | Do. do. | 7 | Feb'y, August | " | 1867 | | 80 |
| Ohio and Pennsylvania | 1,750,000 | Do. do. | 7 | Jan'y, July | " | 1865-66 | 69 | 70 |
| Do. do. | 2,000,000 | Income, convertible | 7 | April, October | " | 1872 | 55 | 66 |
| Pennsylvania (Central) | 5,000,000 | 1st mortgage, conv. till 1860 | 6 | Jan'y, July | Phila. | 1860 | 100 1/2 | 101 1/2 |
| Racine and Mississippi | 680,000 | Do. conv. sink'g'd | 8 | Feb'y, August | N.Y. | 1875 | | 75 |
| Scioto and Hocking Valley | 300,000 | Do. 1st sec. conv. | 7 | May, Novemb. | " | 1861 | | |
| Steubenville and Indiana | 1,500,000 | Do. convertible | 7 | Jan'y, July | " | 1865 | | |
| Terre Haute and Indianapolis | 600,000 | Do. do. | 7 | March, Sept. | " | 1866 | | |
| Terre Haute and Alton | 1,000,000 | Do. do. | 7 | Feb'y, August | " | 1867-72 | 68 | 72 |

| NAMES OF COMPANIES. (The following quotations include the accrued interest.) | Amount of Loan. | Description of Bonds. | Rate Int. | Interest payable. | Where payable. | Due. | Offered. | Asked. |
|---|-----------------|---------------------------------|-----------|-------------------|----------------|---------|----------|---------|
| Baltimore and Ohio | 1,128,500 | Mortgage | 6 | Jan'y, July | Balt. | 1875 | 85 1/2 | 86 1/2 |
| Chicago and Rock Island | 2,000,000 | 1st mortgage, conv. till 1858 | 7 | 10 Jan. 10 July | N.Y. | 1870 | 94 | 96 |
| Erie Railroad | 3,000,000 | 1st mortgage | 7 | May, Novemb. | " | 1867 | 96 | 97 |
| Do. do. | 4,000,000 | 2d mortgage convertible | 7 | March, Sept. | " | 1859 | 83 | 84 |
| Do. do. | 6,000,000 | 3d mortgage | 7 | March, Sept. | " | 1863 | 72 1/2 | 73 |
| Do. do. | 6,000,000 | 4th mortgage not convertible | 7 | April, October | " | 1860 | 56 | 57 |
| Do. do. | 4,000,000 | Not conv. Sink Fund, \$420,000 | 7 | Feb'y, August | " | 1875 | 31 | 33 |
| Do. do. | 4,351,000 | Convertible Inscription | 7 | Feb'y, August | " | 1871 | 30 | 31 |
| Do. do. | 3,500,000 | Convertible | 7 | Jan'y, July | " | 1862 | 30 | 32 |
| Hudson River | 4,000,000 | 1st mortgage, Inscription | 7 | Feb'y, August | " | 1869-70 | 102 | 102 1/2 |
| Do. do. | 2,000,000 | 2d do. | 7 | 16 June, 16 Dec. | " | 1860 | 94 | 94 1/2 |
| Do. do. | 3,000,000 | 3d do. convertible | 7 | May, Novemb. | " | 1870 | 76 1/2 | 77 1/2 |
| Illinois Central | 17,000,000 | Mortgage, inconvertible | 7 | April, October | " | 1870 | 90 1/2 | 91 |
| Do. (Free Land) | 3,000,000 | M'ge 345,000 acrs-priv. 7 shars | 7 | March, Sept. | " | 1860 | 91 | 91 1/2 |
| Michigan Southern | 1,000,000 | 1st mortgage, inconvertible | 7 | May, Novemb. | " | 1860 | 84 1/2 | 88 |
| New York and Harlem | 1,250,000 | Do. do. | 7 | May, Novemb. | " | 1861-72 | 94 1/2 | 95 |
| New York and New Haven | 750,000 | No mortgage, do. | 7 | June, Decemb. | " | 1856-60 | 96 | 98 |
| New Haven and Hartford | 1,000,000 | 1st mortgage, do. | 6 | Jan'y, July | " | 1873 | 90 | 94 |
| Northern Indiana | 1,000,000 | Do. do. | 7 | Feb'y, August | " | 1861 | 80 | 83 |
| Do. Goshen Branch | 1,500,000 | Do. do. | 7 | Feb'y, August | " | 1868 | 71 1/2 | 72 1/2 |
| New York Central | 8,287,000 | No mortgage, do. | 6 | May, Novemb. | " | 1863 | 92 1/2 | 93 |
| Do. do. | 3,000,000 | om'ge conv. from June 57-59 | 7 | 15 June, 15 Dec. | " | 1864 | 103 1/2 | 104 |
| Panama, 1st issue | 900,000 | Convertible till 1856 | 7 | Jan'y, July | " | 1866 | 118 | |
| Do. 2d do | 1,475,000 | Do. till 1856 | 7 | Jan'y, July | " | 1866 | 90 | 91 |
| Reading | 1,000,000 | Mortgage, inconvertible | 6 | Jan'y, July | Phila. | 1860 | | |
| Do. do. | 3,469,000 | Do. convertible | 6 | Jan'y, July | " | 1870 | 84 1/2 | 85 |
| Do. do. | | Do. inconvertible | 6 | April, October | " | 1866 | 75 | 76 |

| CITY SECURITIES. | Int't payable. | Off'd | Ask | CITY SECURITIES. | Int't payable. | Off'd | Ask |
|-------------------------------------|----------------|--------|-----|--|----------------|--------|--------|
| New York, 5 per ct. 1858-70 | 98 | 99 | | Milwaukee, 7 per ct. coup. | X | Divers | 45 |
| Do. 5 per ct. 1870-75 | 98 | 95 | | New Orleans, 6 per ct. cp. B.R. X | Do. | | 75 |
| Do. 6 do. 1883 | 103 1/2 | 104 | | N. Orleans, 6 per ct. cp. municip. X | Jan'y, July | | 85 |
| Do. 5 do. 1890-98 | 92 | 95 | | Philadelphia, 6 per ct. 1876-98 | Jan'y, July | | 98 1/2 |
| Albany, 6 per ct. coup. 1871-81 X | 98 | 101 | | Pittsburgh, 6 per ct. coup. | X | Divers | 45 |
| Alleghany, 6 per ct. coup. X | 90 | 80 | | Quincy, 8 per ct. coup. 1868 X | Jan'y, July | | 67 |
| Baltimore, 6 per ct. 1879-90 | 99 | 100 | | Racine, 7 per ct. coup. 1873 X | 10 Feb'y, Aug | | 80 |
| Boston, 5 per ct. coup. X | 100 | 101 | | Rochester, 6 per cent. coup. X | X | Divers | 90 |
| Brooklyn, 6 per ct. coup. Long X | 101 1/2 | 102 | | St. Louis, 6 per ct. coup. Long X | Do. | | 84 |
| Clev'Pd, 7 per ct. W.W. 1879 X | 100 | 103 | | Do. Municipal X | Do. | | 86 |
| Cincinnati, 6 per ct. coup. X | 92 1/2 | 95 | | Sacramento, 10 p. ct. cp. 1862-74 X | Do. | | 37 |
| Chicago, 6 per ct. coup. 1873-77 X | 85 | 87 | | S. Francisco, 7 p. cp. 1865, pay. N.Y. X | May, Novemb. | | 60 |
| Do. 7 per ct. coup. 1880 X | 97 1/2 | 99 1/2 | | Do. 10 p. ct. cp. 1871 X | Do. | | 89 |
| Detroit, 7 per ct. W.W. 1873-78 X | 100 | 102 | | Do. 10 p. cp. pay. N.Y. X | Jan'y, July | | 66 |
| Dubuque, 8 per ct. cp. Long X | 99 | 100 | | Do. 6 per ct. pay. N.Y. 1875 X | Do. | | 61 |
| Forney City, 8 p. ct. W.W. 1877 X | 99 | 101 | | Washington, 6 per ct. coup. X | Divers | | 50 |
| Louisville, 6 per ct. cp. 1860-68 X | 71 | 73 1/2 | | Do. 6 p. ct. Muni. 1874 X | March, Sept. | | 80 |
| Memp'ls, 6 per ct. coup. 1882 X | 74 | 87 | | Savannah, 7 do. do. X | April, October | | 81 1/2 |

feeling seems to have prevailed on the occasion.

American Railroad Journal.

Saturday, April 9, 1859.

WOODEN BRIDGES.

We commence with this number the publication of a TREATISE on the construction of *wooden bridges*, by S. S. Post, Esq., Civil Engineer and late Chief Engineer of the New York and Erie railroad. The treatise commences with a statement of elementary principles, which are carried forward by regular and necessary inductions to their application to every kind of structure. There is probably no work of the kind, which comprises in so small a compass, full working details, with the principles on which they are based. It has been highly approved by such of our engineers as have had an opportunity to examine it, and we think we can commend it, to engineers and to railroad companies, as eminently worthy of their attentive study. It has the advantage of having all its terms and propositions stated in such a manner, as to be easily understood by any intelligent mechanic. Mr. Post is well known to be one of our most ingenious and best informed engineers, and has given particular attention to the subject on which he has written.

The La Mothe Patent Car.

The great strength and elasticity of riveted strips of thin iron as combined in the basket-like frame of the car patented by Dr. La Mothe, have been several times commented on in our columns. Iron which has been worked down into thin strips is universally sounder and stronger than the same metal in larger masses and the interweaving or alternation of the strips at the points where the bands intersect, and the riveting through at those points, gives a kind of mutual bracing to the work which is not paralleled in any other engineering construction, but is quite nearly approached in some of the refined forms of bridges.

Recently, the management of several of the principal railroads connecting at Boston, have combined to test by practice, a car of full size, built according to this plan, and the construction will in a few weeks be completed and ready for trial. We have paid a visit to the shop of Mr. Cundell, at Paterson, where it is being finished, and the appearance of the work under the few tests of strength and stiffness to which it has been yet subjected argue very strongly for a complete revolution in this branch of business and the adoption of this system universally as very far preferable to any form of wooden car yet proposed.

The running parts will be those of the ordinary kind and of the ordinary weight, although they might evidently be made a little lighter, by reason of the difference in load they are to carry.—The body will weigh 9,000 lbs., which is only from one-half to two-thirds the weight of modern ones of the same size. It is intended to give a very great surplus of strength to this car, as the first on this principle of such size. There is little doubt that the weight of every car can be reduced two tons by adopting this system of construction, and secure a greater degree of strength and safety than at present. The effect of such light cars in reducing the expenses for motive power, repairs of track, etc., and increasing the capacity for use,

ful, paying load, it is difficult to fully appreciate. We are rejoiced to find that the initiative step is being taken.

Interest and Dividends.

The interest coupons on the Schuyler county (Ill.) bonds, due April 1, will be paid on presentation by Mills & Ray, No. 318 Broadway.

The interest coupons of the bonds issued by Shelby county, Ohio, to the Bellefontaine and Indiana railroad company, not presented on the 1st inst., at the American Exchange Bank, will have to be presented at the Treasurer's office, in Sidney, Ohio. The coupons on the Syracuse, Binghamton and New York railroad company's bonds, due 1st of April, are paid on presentation, at the Continental Bank.

Pacific Railroad of Missouri.

The total length of the main line of this road is 282 miles, extending from St. Louis, in a nearly due west direction, to Kansas City. We have before us the report of the officers of this company, made to the Board of Public Works, bearing date December 24, 1858. Up to that time, 163 miles of the road, from St. Louis to Tipton, had been completed, leaving 119 miles unfinished, of which 12 miles continuously west of Tipton, and a few difficult sections in Johnson county, were in progress. The grades between St. Louis and Jefferson City do not exceed 45 feet per mile; beyond that, 60 feet grades are encountered. With a single exception, there are no curves of a less radius than 1,432 feet on the entire road. The road is represented as being in very good condition between St. Louis and Jefferson City. West of that point it is new, and some portions of it had not been put in thorough order. The masonry and bridging on the road were regarded as substantial and safe, and the operations of the transportation department were being satisfactorily conducted. The earnings of the road for the year ending November 30th, 1858, were:—

| | |
|----------------------|--------------|
| From passengers..... | \$320,791 44 |
| " freight..... | 296,580 70 |
| " mails..... | 19,139 60 |

Total earnings.....\$636,511 74

The receipts from earnings of the road from the commencement of operations, to November 30, 1858, were:

| | |
|----------------------|----------------|
| From passengers..... | \$1,060,282 70 |
| " freight..... | 754,031 78 |
| " mails..... | 45,378 16 |

Total receipts.....\$1,859,692 64

The transportation expenses during that period were...\$1,147,027 65

| | |
|-------------------------------------|-----------|
| Expenses of Gasconade disaster..... | 21,757 76 |
| Cars destroyed and rebuilt..... | 7,374 94 |

1,176,160 35

Net earnings to November 30, 1858. \$683,532 29

The interest charged to transportation department during the same time was..... 834,455 87

| | |
|--------------------------------------|--------------|
| Showing a deficiency in 1858, of.... | \$150,923 58 |
| In 1857, the deficiency was..... | 179,600 03 |
| In 1856, " " "..... | 88,667 50 |
| In 1855, " " "..... | 44,348 51 |

The total amount subscribed to the capital stock of the main line is \$3,804,400. The amount collected \$3,146,170 25. The net proceeds of which, (after deducting \$189,382 50 for discounts and commissions on St. Louis city and county

bonds, received in payment therefor, and \$83,826 for commissions for collecting subscriptions west of Jefferson City, is \$2,923,012 70. The amount of State bonds authorized for the main line is \$7,000,000; the amount issued to the company, \$6,780,000; the discounts and commissions, \$753,593 11. The net proceeds, \$6,026,406 89. The amount due the company the first of March was \$220,000.

The cost of the road to Jefferson City, exclusive of rolling stock and general expenses, is stated at \$5,974,953 75; the gross cost of the road to that point is \$7,542,353 73; the total amount expended on the main line, including discounts, commissions, etc., is \$10,033,823 05. The estimated cost of the road from Jefferson City to Kansas City is \$4,514,000; the additional means required for that purpose the board estimated at not less than \$3,500,000. The gross cost of the work done west of Jefferson is \$1,717,051 70. The gross cost of the rolling stock is \$774,417 60. The whole amount of debt due and to become due by the company, on the main line, exclusive of bonds, is put down at \$478,232 29. The whole amount due and to become due to the company, exclusive of unpaid instalments on stock is \$406,576 26—of this sum, \$68,045 11 is in litigation. The value of the remainder the board has no means of estimating.—The amount of interest to be paid by the company on State bonds and free land bonds on the main line, is \$408,410. The annual interest on the State bonds now issued is \$406,800—on the whole amount authorized, \$420,000.

The following statement of the estimated cost and progress of the work upon the main line from Jefferson City west, is extracted from a report made by the Chief Engineer to the Board of Directors in October last. The estimates are full and include graduation, masonry, bridging, superstructure, ballasting, fencing, buildings, etc.,:

| | Work done. | Remaining to be done. | Total cost. |
|----------------------|-------------|-----------------------|-------------|
| To Tipton..... | \$1,181,918 | \$93,082 | \$1,275,000 |
| " Otterville.... | 121,369 | 292,631 | 414,000 |
| " Sedalia..... | 10,260 | 259,740 | 270,000 |
| " Knob Noster | 6,727 | 419,273 | 426,000 |
| " Warrensburg | 20,037 | 332,963 | 353,000 |
| " Kingsville..... | | 506,000 | 506,000 |
| " Pleasant Hill..... | | 298,000 | 298,000 |
| " Independence..... | | 642,000 | 642,000 |
| " Kansas City..... | | 330,000 | 330,000 |

\$1,340,311 \$3,173,689 \$4,514,000

The following is a brief statement of the quantity, condition, value, etc., of the lands donated to the State, for this company, by act of Congress passed June 10, 1852:

For main line—1st division..... 127,000 acres.

" South West Branch..... 1,040,000 "

Total..... 1,167,000 "

The former are *free lands*—not being subject to the mortgage to the State under the act of the General Assembly of December 10, 1855. These lands are situated in St. Louis, St. Charles, Jefferson, Washington, Franklin and Crawford counties; and embrace a large quantity of fair agricultural lands, a portion of the Pine lands of Washington county, and overlay one of the most varied, extensive, and richest mineral regions in the State—lead, copper and iron all being found upon them in large quantities. Of these lands, 1,225 acres have been sold—the greater portion of which was

purchased under pre-emption rights at \$2.50 per acre. The value of the remainder is put down in the report of the company's land agent at \$5—equal to \$628,875. On these lands there has been created a mortgage to secure the payment of \$600,000 of "Free land bonds." Of these bonds, \$373,000 have been used by the company; \$250,000 are hypothecated to secure the payment of \$136,000 for iron purchased in 1856; \$23,000 were sold to private individuals; and the remainder, \$227,000 are still in the possession of the company—the total incumbrance upon the free lands is therefore \$159,000. These lands have been recently examined, and are now being classified preparatory to being sold.

The portion applicable to the South West Branch are valued at \$10,425,000, and consists of agricultural, pastoral, timbered and mineral lands—extending the entire length of the branch. Upon them are large bodies of prairies, interspersed with abundant timber, and well watered; also, forests of pine, and the most extensive and richest deposits of mineral that have ever been worked. These lands have been mortgaged to secure the payment of bonds, to the amount of \$10,000,000; to be issued under it. Of these bonds \$4,500,000 have been guaranteed by the State; and \$132,000 of the guaranteed bonds, together with \$1,268,000 of direct bonds of the State (in lieu of guaranteed bonds) issued to the company—making the whole amount of direct and guaranteed bonds received by the company for the use of the South West Branch \$1,400,000, and leaving to be drawn \$3,100,000.

The total amount of stock subscribed is \$356,000—of which \$66,973 has been collected.

The discounts, commissions and interest amount to \$308,249 27. The interest on State bonds now issued is \$76,080; on guaranteed bonds at 7 per cent., \$9,240.

The length of the South West Branch of the Pacific railroad is 283 miles; 19 miles are completed and in use, and 43 more in progress of construction. The maximum grade, is 65 feet. The minimum radius of curvature at one point is 882 feet, upon a level grade. With this exception, the minimum radius, is 955 feet. The Chief Engineer is of opinion that a good road, with superstructure and buildings, can be obtained at the contract price, viz: \$7,621,680. The total expenditures on the branch to November 30, 1858, were \$1,442,710 36—the amount of debt due on the same, \$84,281 86.

CONDENSED BALANCE SHEET, NOV. 30, 1858.

DR.

| | |
|---------------------------------------|-----------------|
| Capital stock—main line..... | \$3,263,684 65 |
| Capital stock—South West Branch..... | 66,973 33 |
| | \$3,330,657 98 |
| Bonded debt—main line..... | \$6,803,000 00 |
| Bonded debt—South West Branch..... | 1,400,000 00 |
| | \$8,203,000 00 |
| Premium received on bonds..... | 71,594 30 |
| Land grant sales and rents..... | 6,498 23 |
| Floating debt, main line..... | 476,850 89 |
| Floating debt, South West Branch..... | 84,281 86 |
| Due R. Benson & Co. | 1,381 40 |
| | 562,514 15 |
| | \$12,174,264 66 |

| | |
|---|-----------------|
| Construction St. Louis to Jefferson. | \$5,974,953 75 |
| " West of Jefferson.... | 1,360,217 16 |
| " South West Branch.. | 1,104,010 89 |
| Equipment | 618,357 60 |
| Interest, discount and commission, main line..... | 1,961,400 09 |
| Interest, discount and commission South West Branch..... | 308,249 27 |
| Office expenses, stationery, etc.... | 123,894 45 |
| Land grant, including Geographical survey, South West Branch..... | 30,450 20 |
| Undistributed balances..... | 54,835 18 |
| Int. charged to transp.. | \$834,455 87 |
| Less net earnings..... | 683,532 29 |
| | 150,923 58 |
| Steamboat line balance of accounts. | 51 04 |
| Bills receivable..... | \$162,445 18 |
| State bonds issued for South West Branch. | 127,000 00 |
| Sundry accounts..... | 152,229 86 |
| Bonds of town of Hermann..... | 500 00 |
| Cash..... | 49,746 41 |
| | 491,921 45 |
| | \$12,174,264 66 |

The officers of the company are:
JOHN M. WIMER, *President*.
EDWARD MILLER, *Chief Engineer*.
T. MCKISSOCK, *General Superintendent*.

Car Springs and India Rubber.

In the last issue of the JOURNAL, we published an article under the above head, purporting to give the result of a suit in favor of the New England Car Spring Company, against Hiram P. Dunbar, et al. for an alleged violation of the rights of the former, in the manufacture of *India Rubber Springs*.

We have since seen the report of the Judge's (Grier) opinion, which gives an entirely different aspect to the case from that stated in the article referred to. The case was an application for a temporary *injunction* to restrain the defendants from the manufacture of Rubber Springs. The Judge, without intimating an opinion as to the merits of the case at issue, refused the injunction, but ordered the defendants to keep an account of all car springs made, and sold by them, as a basis for damages, in case of a final decision against them—no suggestion being made that they were insolvent, or that the plaintiffs were in danger of loss from not granting the injunction.

Houston and Texas Central Railroad.

We learn that this company has entered into a contract with Mr. Henry P. Adams, of this city, to construct eighty-two and a half miles of the road, commencing a few miles north of the Navisota, and extending to six miles west of Springfield, in Limestone county. Fifty miles are to be completed by the 1st of June, 1860, and the remainder by the 1st of November following. The contract price is \$21,000 per mile, of which \$3,000 is to be paid in stock, \$14,500 in thirty year bonds, and the remainder in cash and its equivalent.

Railroads in Maine.

We give herewith a statement of the railroads of Maine similar to that of the railroads of New Hampshire, presented last week. The roads described embrace all the lines of the State, with the exception of the Buckfield Branch, 13 miles, the Great Falls and South Berwick, 3½ miles, and the Franklin railroad, 9 miles. The first two are not in operation. The former is owned by one person, and may, we presume, be considered as abandoned as a public highway. It has been in use only a portion of the time since it was

opened, and no statistics are obtainable in reference to it. The Great Falls and South Berwick railroad has, we believe, never been in operation, and will very probably be abandoned. The Franklin railroad belongs to a manufacturing company and is used in the transportation of lumber, and cannot be regarded as a public highway.

The aggregate result of the operation of the railroads of the State since the opening of the first road in 1837, may be stated as follows:—Total cost, (that of the several years being added together)—\$129,151,837. Gross earnings \$10,795,861; current expenses, \$6,073,643; net earnings, \$4,722,218.

The general result is not a favorable one. The per centage of gross earnings to capital invested, has been at the rate of 8½ per cent.—net, do, at the rate of 3½ per cent. The large addition, from earnings, to construction, by some of the roads, particularly by the Atlantic and St. Lawrence is one reason for the comparatively small ratio of *net* earnings.

All the railroads of Maine, with the exception of the Atlantic and St. Lawrence, have a very light traffic in *freight*, owing to the almost unrivalled facilities for communication by water, which the State possesses.

RECAPITULATION

Showing the cost, earnings, etc., of the Maine Railroads, from the opening of the Bangor, Oldtown and Milford Railroad to the present time.

| Year. | Length. | Cost. | Gross Receipts. | Current Expenses. | Net Receipts. | Aggregate of Passengers, Freight, & Mail for 6 Yrs. | Do. Mail. |
|----------------|---------|---------------|-----------------|-------------------|---------------|---|-----------|
| 1838—1842..... | 60 | \$1,794,739 | \$86,217 | \$66,829 | \$20,388 | \$26,614 | \$2,820 |
| 1843..... | 63 | 1,426,938 | 47,918 | 34,900 | 13,018 | 84,966 | 9,062 |
| 1844..... | 63 | 1,537,722 | 124,812 | 60,176 | 64,636 | 10,957 | 7,128 |
| 1845..... | 63 | 1,615,480 | 150,180 | 64,131 | 76,049 | 106,137 | 18,138 |
| 1846..... | 63 | 1,628,739 | 150,248 | 70,109 | 80,139 | 98,991 | 18,508 |
| 1847..... | 63 | 1,639,556 | 173,209 | 72,723 | 100,486 | 120,454 | 8,674 |
| 1848..... | 63 | 1,406,824 | 104,636 | 78,842 | 115,788 | 129,344 | 10,668 |
| 1849..... | 111 | 2,927,091 | 293,799 | 124,319 | 169,480 | 190,707 | 10,620 |
| 1850..... | 111 | 3,070,854 | 361,981 | 149,912 | 212,069 | 234,899 | 16,629 |
| 1851..... | 254 | 8,219,648 | 571,204 | 270,565 | 300,639 | 265,170 | 27,987 |
| 1852..... | 349 | 11,188,350 | 711,459 | 340,770 | 370,689 | 428,980 | 35,010 |
| 1853..... | 385 | 12,998,056 | 963,416 | 467,329 | 496,087 | 561,039 | 46,294 |
| 1854..... | 385 | 13,625,760 | 1,236,037 | 658,401 | 577,636 | 636,688 | 58,218 |
| 1855..... | 385 | 14,064,040 | 1,388,616 | 817,697 | 570,919 | 677,336 | 68,408 |
| 1856..... | 385 | 16,865,308 | 1,524,960 | 987,182 | 537,778 | 736,671 | 63,922 |
| 1857..... | 478 | 17,077,546 | 1,420,255 | 953,389 | 466,762 | 653,688 | 64,986 |
| 1858..... | 607 | 18,070,687 | 1,387,884 | 841,369 | 446,515 | 620,085 | 69,420 |
| | | \$129,151,837 | \$10,795,861 | \$6,073,643 | \$4,722,218 | \$5,523,368 | \$487,718 |
| | | | | | | \$4,233,506 | |

RAILROADS IN MAINE.

Statement showing the cost, earnings, etc., etc., of all the Railroads of Maine, from the opening of the first road to the present time.

| Name of Road. | Length. | Cost. | Gross receipts. | Current expenses. | Net receipts. | Rec'd from pass'gers. | Rec'd from freight. | Do. miscellaneous. | Dividend. |
|--|---------|--------------|-----------------|-------------------|---------------|-----------------------|---------------------|--------------------|-----------|
| Bangor, Oldtown and Milford, 1838.....12 | | \$354,000 | \$19,551 | \$14,577 | \$4,973 | ..... | ..... | ..... | .. |
| Do. do. 1839.....12 | | 354,000 | 19,634 | 14,501 | 5,133 | ..... | ..... | ..... | .. |
| Do. do. 1840.....12 | | 354,000 | 16,324 | 13,888 | 2,427 | ..... | ..... | ..... | .. |
| Do. do. 1841.....12 | | 354,000 | 11,843 | 9,620 | 3,222 | ..... | ..... | ..... | .. |
| Do. do. 1842.....12 | | 378,739 | 18,865 | 13,243 | 5,622 | ..... | ..... | ..... | .. |
| 1843. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$378,739 | \$16,599 | \$13,918 | \$2,681 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,048,194 | 31,319 | 20,982 | 10,337 | \$26,614 | \$1,885 | \$2,820 | 6 |
| Total.....63 | | \$1,426,933 | \$47,918 | \$34,900 | \$13,018 | | | | |
| 1844. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$378,739 | \$19,897 | \$14,127 | \$5,769 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,158,983 | 104,945 | 46,049 | 58,897 | \$84,926 | \$10,957 | \$9,062 | 6 |
| Total.....63 | | \$1,537,722 | \$124,842 | \$60,176 | \$64,666 | | | | |
| 1845. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$378,739 | \$18,776 | \$12,309 | \$6,467 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,236,750 | 131,404 | 51,822 | 79,582 | \$106,137 | \$18,138 | \$7,128 | 6 |
| Total.....63 | | \$1,615,489 | \$150,180 | \$64,131 | \$76,049 | | | | |
| 1846. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$378,739 | \$23,851 | \$14,624 | \$9,226 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,250,000 | 126,397 | 55,485 | 70,913 | \$98,991 | \$18,503 | \$8,702 | 6 |
| Total.....63 | | \$1,628,739 | \$150,248 | \$70,109 | \$80,139 | | | | |
| 1847. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$378,739 | \$24,921 | \$17,271 | \$7,650 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,260,817 | 148,288 | 55,452 | 92,836 | \$120,454 | \$19,157 | \$8,574 | 6 |
| Total.....63 | | \$1,639,556 | \$173,209 | \$72,723 | \$100,486 | | | | |
| 1848. | | | | | | | | | |
| Bangor, Oldtown and Milford.....12 | | \$135,000 | \$33,805 | \$19,617 | \$14,188 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,271,824 | 160,825 | 59,225 | 101,600 | \$129,344 | \$20,891 | \$10,568 | 6 |
| Total.....63 | | \$1,406,824 | \$194,636 | \$78,842 | \$115,788 | | | | |
| 1849. | | | | | | | | | |
| Atlantic and St. Lawrence.....48 | | \$1,500,000 | \$108,662 | \$43,000 | \$65,662 | \$66,893 | \$41,769 | ..... | .. |
| Bangor, Oldtown and Milford.....12 | | 135,000 | 30,382 | 23,133 | 7,249 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,292,091 | 154,755 | 58,186 | 96,569 | 123,814 | 20,531 | \$10,410 | 6 |
| Total.....111 | | \$2,927,091 | \$293,799 | \$124,319 | \$169,480 | \$190,707 | \$62,300 | | |
| 1850. | | | | | | | | | |
| Atlantic and St. Lawrence.....48 | | \$1,642,214 | \$143,631 | \$59,594 | \$84,037 | \$79,148 | \$57,490 | \$6,993 | .. |
| Bangor, Oldtown and Milford.....12 | | 135,000 | 27,549 | 17,482 | 10,067 | ..... | ..... | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,293,640 | 190,801 | 72,836 | 117,965 | 155,751 | 25,413 | 9,636 | 6 |
| Total.....111 | | \$3,070,854 | \$361,981 | \$149,912 | \$212,069 | \$234,899 | \$82,903 | \$16,629 | |
| 1851. | | | | | | | | | |
| Androscoggin and Kennebec.....55 | | \$1,816,770 | \$102,647 | \$63,549 | \$39,098 | \$60,023 | \$37,732 | \$4,892 | .. |
| Atlantic and St. Lawrence.....91 | | 2,826,175 | 173,447 | 70,219 | 103,228 | 81,005 | 80,321 | 12,122 | .. |
| Bangor, Oldtown and Milford.....12 | | 135,000 | 30,161 | 16,413 | 13,748 | 14,988 | 14,988 | 185 | .. |
| Kennebec and Portland.....35 | | 1,742,370 | 67,300 | 30,300 | 37,000 | 49,300 | 18,000 | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,300,323 | 187,605 | 80,792 | 106,813 | 150,847 | 25,969 | 10,789 | 6 |
| York and Cumberland.....10 | | 399,010 | 10,044 | 9,292 | 752 | 9,007 | 1,037 | ..... | .. |
| Total.....254 | | \$8,219,648 | \$571,204 | \$270,565 | \$300,639 | \$265,170 | \$178,047 | \$27,987 | |
| 1852. | | | | | | | | | |
| Androscoggin and Kennebec.....55 | | \$2,009,188 | \$125,658 | \$58,079 | \$67,579 | \$67,088 | \$52,208 | \$6,362 | .. |
| Atlantic and St. Lawrence.....149 | | 4,735,258 | 200,234 | 108,986 | 91,248 | 86,577 | 100,611 | 13,046 | .. |
| Bangor, Oldtown, Milford.....12 | | 135,000 | 31,702 | 18,011 | 13,691 | 16,752 | 14,753 | 197 | .. |
| Calais and Baring.....6 | | 185,000 | 14,616 | 4,992 | 9,624 | 809 | 12,656 | 1,151 | 8 |
| Kennebec and Portland.....66 | | 2,181,000 | 122,290 | 50,000 | 72,290 | 92,290 | 30,000 | ..... | .. |
| Portland, Saco and Portsmouth.....51 | | 1,301,883 | 201,265 | 90,029 | 111,236 | 154,115 | 32,895 | 14,254 | 6 |
| York and Cumberland.....10 | | 641,021 | 15,694 | 10,673 | 5,021 | 11,349 | 4,345 | ..... | .. |
| Total.....349 | | \$11,188,350 | \$711,459 | \$340,770 | \$370,689 | \$428,980 | \$247,468 | \$35,010 | |
| 1853. | | | | | | | | | |
| Androscoggin.....20 | | \$315,365 | \$19,141 | \$10,000 | \$9,141 | \$9,168 | \$0,555 | \$428 | .. |
| Androscoggin and Kennebec.....55 | | 2,020,247 | 140,461 | 60,507 | 79,954 | 71,647 | 63,210 | 5,704 | .. |
| Atlantic and St. Lawrence.....149 | | 5,763,752 | 316,036 | 193,513 | 122,523 | 130,435 | 167,733 | 17,768 | 3 |
| Bangor, Oldtown and Milford.....12 | | 135,000 | 42,372 | 18,654 | 23,718 | ..... | ..... | ..... | .. |
| Calais and Baring.....6 | | 198,468 | 25,721 | 9,804 | 15,917 | 1,700 | 23,769 | 252 | 8 |
| Kennebec and Portland.....72 | | 2,514,067 | 168,113 | 67,561 | 100,552 | 127,127 | 33,604 | 7,381 | .. |
| Portland, Saco and Portsmouth.....51 | | 1,302,458 | 222,981 | 91,563 | 131,418 | 158,901 | 49,570 | 14,508 | 6 |
| York and Cumberland.....20 | | 748,699 | 28,591 | 15,727 | 12,864 | 14,800 | 13,598 | 193 | .. |
| Total.....885 | | \$12,998,056 | \$963,416 | \$467,329 | \$496,087 | \$513,778 | \$361,039 | \$46,234 | |

| | | | | | | | | |
|------------------------------------|------------|---------------------|--|------------------|------------------|------------------|------------------|-----------------|
| 1854. | | | | | | | | |
| Androscoggin..... | 20 | \$343,317 | \$29,782 | \$16,975 | \$12,807 | \$13,916 | \$15,145 | \$1,726 |
| Androscoggin and Kennebec..... | 55 | 2,176,506 | 161,321 | 67,950 | 93,371 | 85,596 | 68,283 | 7,441 |
| Atlantic and St. Lawrence..... | 149 | 6,019,904 | 470,648 | 311,598 | 159,050 | 153,616 | 296,890 | 20,141 |
| Bangor, Oldtown and Milford..... | 12 | 135,000 | 44,189 | 22,150 | 22,039 | 22,595 | 21,594 | ..... |
| Calais and Baring..... | 6 | 217,255 | 28,038 | 11,821 | 16,217 | 1,361 | 25,409 | 1,268 |
| Kennebec and Portland..... | 72 | 2,605,365 | 208,568 | 94,499 | 114,069 | 153,162 | 43,102 | 12,303 |
| Portland, Saco and Portsmouth..... | 51 | 1,363,395 | 262,779 | 108,720 | 154,059 | 189,094 | 58,350 | 15,334 |
| York and Cumberland..... | 20 | 765,018 | 30,712 | 24,688 | 6,024 | 16,348 | 14,364 | ..... |
| Total..... | 385 | \$13,625,760 | \$1,236,037 | \$658,401 | \$577,636 | \$635,688 | \$543,137 | \$58,213 |
| 1855. | | | | | | | | |
| Androscoggin..... | 20 | \$363,551 | \$29,782 | \$16,975 | \$12,807 | \$13,916 | \$14,145 | \$1,721 |
| Androscoggin and Kennebec..... | 55 | 2,245,020 | 190,604 | 99,807 | 90,797 | 97,940 | 85,188 | 7,474 |
| Atlantic and St. Lawrence..... | 149 | 6,194,240 | 542,488 | 386,455 | 156,033 | 154,094 | 367,943 | 20,451 |
| Bangor, Oldtown and Milford..... | 12 | 178,233 | 47,349 | 22,484 | 24,865 | 29,086 | 28,086 | 177 |
| Calais and Baring..... | 6 | 224,000 | 31,640 | 15,616 | 16,024 | 1,420 | 28,890 | 1,330 |
| Kennebec and Portland..... | 72 | 2,766,677 | 228,566 | 114,104 | 114,462 | 167,438 | 49,042 | 12,086 |
| Portland, Saco and Portsmouth..... | 51 | 1,317,605 | 278,919 | 136,788 | 142,131 | 202,361 | 62,161 | 14,397 |
| York and Cumberland..... | 20 | 774,714 | 39,268 | 25,468 | 13,800 | 21,372 | 17,125 | 771 |
| Total..... | 385 | \$14,064,040 | \$1,388,616 | \$817,697 | \$570,919 | \$677,636 | \$652,580 | \$58,403 |
| 1856. | | | | | | | | |
| Androscoggin..... | 20 | \$454,277 | \$25,209 | \$16,326 | \$8,883 | \$11,080 | \$12,845 | \$1,284 |
| Androscoggin and Kennebec..... | 55 | 2,210,947 | 209,475 | 99,676 | 109,799 | 107,417 | 94,931 | 7,129 |
| Atlantic and St. Lawrence..... | 149 | 6,368,576 | 565,168 | 461,312 | 103,856 | 151,805 | 393,072 | 20,290 |
| Bangor, Oldtown and Milford..... | 12 | 178,233 | 35,696 | 17,798 | 17,898 | 18,106 | 17,490 | 100 |
| Calais and Baring..... | 6 | 224,566 | 37,172 | 16,973 | 20,199 | 2,521 | 33,201 | 1,450 |
| Kennebec and Portland..... | 72 | 2,871,264 | 204,367 | 138,747 | 65,620 | 142,059 | 51,826 | 10,482 |
| Penobscot and Kennebec..... | 55 | 1,723,408 | *145,478 | 70,429 | 75,049 | 94,436 | 44,655 | 6,387 |
| Portland, Saco and Portsmouth..... | 51 | 1,359,218 | 270,214 | 138,921 | 131,293 | 192,885 | 61,299 | 16,029 |
| Somerset and Kennebec..... | 20 | 700,000 | Run by the Kennebec and Portland R. R. | ..... | ..... | ..... | ..... | ..... |
| York and Cumberland..... | 20 | 774,714 | 32,181 | 27,000 | 5,181 | 16,362 | 15,048 | 771 |
| Total..... | 460 | \$16,865,203 | \$1,524,960 | \$987,182 | \$537,778 | \$736,671 | \$724,367 | \$63,922 |
| 1857. | | | | | | | | |
| * For 15 months. | | | | | | | | |
| Androscoggin..... | 26 | \$555,897 | \$25,365 | \$13,489 | \$11,876 | \$10,976 | \$13,051 | \$1,338 |
| Androscoggin and Kennebec..... | 55 | 2,210,947 | 258,534 | 117,673 | 140,861 | 135,236 | 113,383 | 9,915 |
| Atlantic and St. Lawrence..... | 149 | 6,954,828 | 567,644 | 500,342 | 67,301 | 154,276 | 402,799 | 19,408 |
| Bangor, Oldtown and Milford..... | 13 | 178,307 | 32,725 | 16,362 | 16,363 | 15,110 | 17,411 | 204 |
| Calais and Baring..... | 6 | 224,000 | 32,381 | 13,720 | 18,661 | 2,407 | 28,558 | 1,416 |
| Kennebec and Portland..... | 72 | 2,871,264 | 219,886 | 147,706 | 72,180 | 139,574 | 66,958 | 13,354 |
| Penobscot and Kennebec..... | 55 | 1,950,341 | Run by the Androscoggin and Kennebec R. R. | ..... | ..... | ..... | ..... | ..... |
| Portland, Saco and Portsmouth..... | 51 | 1,359,573 | 253,707 | 121,010 | 132,697 | 189,487 | 56,104 | 8,116 |
| Somerset and Kennebec..... | 37 | 734,389 | Run by the Kennebec and Portland R. R. | ..... | ..... | ..... | ..... | ..... |
| York and Cumberland..... | 20 | 398,000 | 30,070 | 29,186 | 984 | 16,792 | 12,493 | 785 |
| Total..... | 478 | \$17,077,546 | \$1,429,251 | \$959,389 | \$469,762 | \$653,858 | \$720,757 | \$54,636 |
| 1858. | | | | | | | | |
| Androscoggin..... | 33 | \$645,271 | \$30,957 | \$13,693 | \$17,263 | \$10,877 | \$18,609 | \$1,471 |
| Androscoggin and Kennebec..... | 55 | 2,210,947 | 279,149 | 133,255 | 145,894 | 144,308 | 118,273 | 16,568 |
| Atlantic and St. Lawrence..... | 149 | 7,077,379 | 545,791 | 395,567 | 150,224 | 146,871 | 380,155 | 18,765 |
| Bangor, Oldtown and Milford..... | 13 | 175,232 | 33,059 | 16,529 | 16,530 | 12,870 | 19,895 | 294 |
| Calais and Baring..... | 6 | 224,000 | 28,383 | 15,984 | 12,399 | 1,697 | 25,676 | 1,010 |
| Kennebec and Portland..... | 72 | 2,871,264 | 165,074 | 94,328 | 70,746 | 87,591 | 54,977 | 22,506 |
| Lewey's Island..... | 16 | 310,000 | 12,950 | 7,000 | 5,950 | 2,100 | 10,550 | ..... |
| Penobscot and Kennebec..... | 55 | 1,874,831 | Run by the Androscoggin and Kennebec R. R. | ..... | ..... | ..... | ..... | ..... |
| Portland, Saco and Portsmouth..... | 51 | 1,500,000 | 211,997 | 110,498 | 101,499 | 155,954 | 48,029 | 8,014 |
| Somerset and Kennebec..... | 37 | 783,763 | *50,000 | *30,000 | 20,000 | 25,000 | 25,000 | ..... |
| York and Cumberland..... | 20 | 398,000 | 30,524 | 24,519 | 6,005 | 13,817 | 15,907 | 800 |
| Total..... | 507 | \$18,070,687 | \$1,387,884 | \$841,369 | \$465,515 | \$620,085 | \$667,376 | \$69,420 |

* Estimated.

Baltimore and Ohio Railroad.

From the following communication it will be seen that this company will probably pay regular dividends hereafter in April and October. The communication is in answer to a resolution of inquiry passed by the Baltimore City Council:

BALTIMORE AND OHIO RAILROAD,
PRESIDENT'S OFFICE, April 1, 1859.

John W. Randolph, Esq., Chairman:

SIR: Your communication of the 16th ultimo was received during my absence from the city.

In reference to your inquiry regarding the probability of the Baltimore and Ohio railroad company paying a dividend in April and October of this year, and the amount of dividend that may be paid, I respectfully state that the net earnings and present financial condition of the company will justify a dividend of 3 per cent., for the fiscal half year terminating 31st ultimo, which doubtless the Board will declare at an early day.

As the company is now free from floating debt, I see no cause, with judicious management and no extraordinary disasters, to prevent the payment of regular dividends hereafter.

Very respectfully, your obedient servant,
J. W. GARRETT, President.

Pittsburg, Fort Wayne and Chicago R. R.

At the annual meeting of the stockholders of this company held at Pittsburg on the 30th ult., the following gentlemen were re-elected directors, viz: J. Edgar Thomson, Philadelphia; T. Haskins Du Puy, Pittsburg; George W. Cass, Pittsburg; Wm. Robinson, Jr., Pittsburg; C. M. Russell, Massillon; John Lerwill, Wooster; George W. Bailey, Wooster; R. McKelly, Upper Sandusky; J. K. Edgerton, Fort Wayne; Samuel Hanna, Fort Wayne; Jesse L. Williams, Fort Wayne; A. L. Wheeler, Plymouth; John Evans, Wm. B. Ogden, Chicago; and R. H. Winslow, New York.

The Board subsequently met and organized by the re-election of the present officers: President, J. Edgar Thomson; Vice President, J. K. Edgerton; Acting President, T. Haskins Du Puy.

The report of the President, J. Edgar Thomson, Esq., was read. From it we learn that the capital stock of the company, on the 31st of December last, was \$6,266,555; amount of mortgage bonds on real estate and road to date, \$9,029,765; floating debt of all classes, \$1,755,982. Total cost of road and equipment, \$14,631,110; cost of real estate to the company, \$971,604, which, together with stocks and bonds of other companies, fuel on road and materials on hand, cash and bills receivable, accounts good and bad (including \$89,581 due by Gen. Larimer), mortgage bonds and notes, coupons, &c., amount to a total of \$17,046,252. The earnings of the road during the year 1858 were \$1,567,232; expenditures for all, \$1,651,170,

showing an excess of latter for the year of \$83,938 26. The total earnings of 1857, \$1,660,424; of 1858, \$1,567,232; decrease, \$93,162. The expenses of 1858, as compared with those of 1857, show a decrease of \$103,117 73.

Panama Railroad.

At the annual meeting of this company for the election of directors held on the 4th inst., the following gentlemen were unanimously chosen:—Messrs. David Hoadley, William H. Aspinwall, Edwin Bartlett, Henry Chauncey, Samuel W. Comstock, Edward Cunard, William Fellowes, Gouverneur Kemble, Theodore W. Riley, James T. Scoutter, John Steward, Jr., Isaac Townsend, and William Whiteright, Jr.

Milwaukee Railroads

Statement of Monthly Earnings of Railroads entering Milwaukee.

MILWAUKEE AND MISSISSIPPI RAILROAD.

| Passengers. | Freight. | Mail & Mis. | Total. |
|-------------------|-----------|-------------|------------|
| Jan.. \$15,979 32 | 25,817 12 | 1,375 00 | 43,181 44 |
| Feb.. 14,156 58 | 24,534 65 | 1,305 00 | 39,996 23 |
| Mar.. 21,134 39 | 29,285 33 | 1,494 66 | 51,914 38 |
| April.. 33,990 06 | 49,798 33 | 1,216 66 | 76,005 95 |
| May.. 30,410 83 | 55,110 33 | 1,216 66 | 86,737 82 |
| June.. 29,422 81 | 73,060 09 | 1,216 66 | 103,699 56 |
| July.. 29,353 12 | 68,215 72 | 1,877 60 | 99,446 44 |
| Aug.. 26,617 85 | 32,641 56 | 1,877 61 | 66,137 02 |
| Sep.. 29,607 73 | 75,419 04 | 1,877 61 | 106,904 38 |
| Oct.. 34,635 64 | 55,963 17 | 1,877 61 | 92,467 42 |
| Nov.. 19,780 12 | 41,710 03 | 1,880 41 | 63,350 56 |
| Dec.. 20,696 58 | 30,334 83 | 1,384 41 | 53,415 82 |

\$305,805 83 557,900 20 19,479 89 883,186 02

Comparative Monthly Statement.

| | 1856. | 1857. | 1858. |
|--------------|-------------|------------|------------|
| January.... | \$36,589 02 | 28,461 23 | 43,181 44 |
| February.... | 28,531 64 | 34,107 55 | 39,996 23 |
| March..... | 30,563 86 | 40,591 30 | 51,934 38 |
| April..... | 35,521 39 | 45,986 75 | 76,005 95 |
| May..... | 61,367 39 | 81,478 88 | 86,737 82 |
| June..... | 66,086 12 | 118,443 49 | 103,699 56 |
| July..... | 53,070 69 | 91,364 06 | 99,446 44 |
| August..... | 56,564 62 | 80,784 09 | 66,137 02 |
| September.. | 92,856 90 | 123,007 99 | 106,904 38 |
| October.... | 120,146 52 | 115,920 69 | 92,416 42 |
| November.. | 55,779 13 | 81,093 98 | 63,350 56 |
| December.. | 33,403 30 | 41,577 93 | 53,415 82 |

\$660,680 58 882,817 89 883,186 02

MILWAUKEE, WATERTOWN AND BARABOO VALLEY RAILROAD.

| Passenger. | Freight. | Mail. | Total. |
|--------------------|-----------|--------|-----------|
| March.. \$2,063 07 | 4,899 08 | 266 66 | 7,228 81 |
| April.. 2,383 44 | 5,811 37 | 373 81 | 8,568 62 |
| May... 2,456 08 | 8,792 32 | 365 10 | 11,613 50 |
| June... 2,414 70 | 11,697 25 | 360 60 | 14,472 55 |
| July... 2,927 03 | 10,912 43 | 364 00 | 14,203 46 |
| August.. 2,583 10 | 7,533 60 | 387 49 | 10,504 19 |
| Sept... 3,055 24 | 16,595 01 | 441 74 | 20,091 99 |
| Oct... 2,730 96 | 11,274 12 | 375 79 | 14,380 87 |
| Nov... 2,385 17 | 8,636 77 | 379 80 | 11,401 74 |
| Dec... 1,950 52 | 6,605 03 | 379 56 | 8,935 11 |

\$24,549 31 92,756 98 3,694 55 121,400 84

LA CROSSE AND MILWAUKEE RAILROAD.

| Passengers. | Freight. | Mail. | Total. |
|-------------------|-----------|----------|-----------|
| Jan.. \$10,702 07 | 12,758 24 | 775 86 | 24,236 17 |
| Feb.. 8,946 46 | 10,651 00 | 437 92 | 20,035 38 |
| Mar.. 12,679 38 | 13,040 48 | 544 70 | 26,264 56 |
| April.. 13,785 21 | 17,852 25 | 2,053 03 | 33,690 49 |
| May.. 17,942 92 | 23,803 76 | 632 74 | 42,379 43 |
| June.. 15,043 54 | 28,153 79 | 678 21 | 43,875 54 |
| July.. 17,316 34 | 28,267 40 | 2,025 27 | 47,609 01 |
| Aug.. 16,885 08 | 20,029 05 | 941 17 | 41,555 30 |
| Sept.. 23,714 34 | 37,248 03 | 2,339 18 | 63,301 55 |
| Oct.. 23,357 87 | 32,255 48 | 767 99 | 61,551 34 |
| Nov.. 27,003 05 | 26,944 10 | 1,054 83 | 55,001 98 |
| Dec.. 18,868 92 | 18,937 58 | 4,516 55 | 36,823 65 |

\$205,745 19 269,941 16 16,767 45 492,453 80

MILWAUKEE AND CHICAGO RAILROAD.

| Passengers. | Freight. | Mail. | Total. |
|-------------------|----------|----------|-----------|
| Jan.. \$9,300 21 | 4,889 03 | 271 31 | 14,460 55 |
| Feb.. 7,938 12 | 3,908 29 | 1,369 85 | 13,216 26 |
| Mar.. 11,685 14 | 5,493 13 | 289 84 | 17,468 11 |
| April.. 14,469 50 | 4,575 25 | 1,112 07 | 20,156 82 |
| May.. 13,256 43 | 3,110 91 | 1,686 20 | 18,053 54 |
| June.. 12,836 61 | 2,508 30 | 1,885 79 | 17,230 70 |
| July.. 12,791 42 | 2,556 35 | 1,200 22 | 16,547 99 |
| Aug.. 12,088 58 | 2,129 68 | 683 06 | 14,901 32 |
| Sept.. 13,800 95 | 3,032 61 | 1,653 87 | 17,887 43 |
| Oct.. 14,709 04 | 5,226 16 | 565 01 | 20,500 21 |
| Nov.. 12,467 90 | 2,940 23 | 1,557 35 | 17,965 48 |
| Dec.. 10,242 94 | 4,993 46 | 561 84 | 15,797 74 |

\$145,586 84 46,363 40 12,235 91 204,186 15

DETROIT AND MILWAUKEE RAILROAD.

| | |
|----------------|-------------|
| January..... | \$18,522 49 |
| February..... | 16,134 34 |
| March..... | 21,520 21½ |
| April..... | 31,279 75 |
| May..... | 29,017 35½ |
| June..... | 24,934 23 |
| July..... | 26,626 57 |
| August..... | 31,570 60 |
| September..... | 49,215 80 |
| October..... | 46,149 53 |
| November..... | 36,529 69 |
| December..... | 31,089 39 |

\$362,589 39



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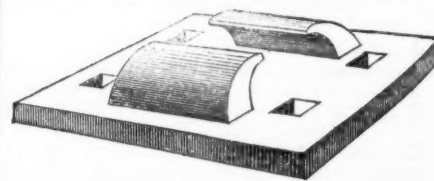
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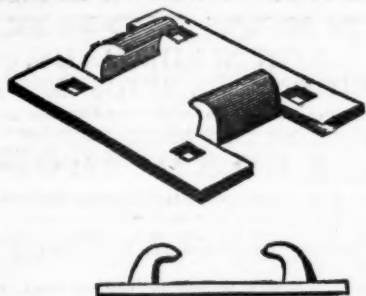
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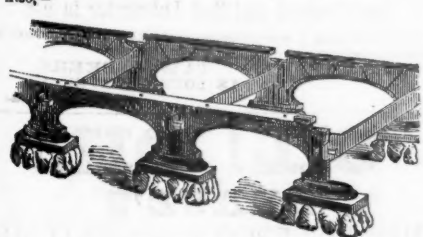
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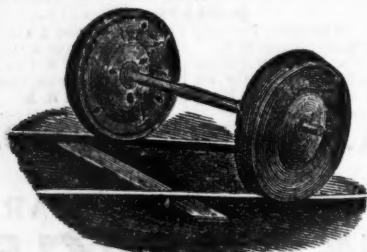
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